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FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

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DECEMBER, 1944

Vol. 97, No. 12

Navy Personnel Operate on a Simulated Crash Fire Using Fog and Foam

A CASE - SHEPPERD - MANN PUBLICATION

ASPHYXIA *knows no Holiday*

Be Ready at all times with an

EMERSON
RESUSCITATOR

■ Stands ready in every way to protect life, no matter what the season. Hundreds of well-equipped fire departments and industrial departments depend on an EMERSON every day of the year, Sundays and holidays included. When you are called out for a shock case, drowning, smoke suffocation, gas poisoning or other asphyxia, be sure you answer with a dependable resuscitator.

Write for literature or an actual demonstration.

J. H. EMERSON COMPANY

Representatives in Principal Cities

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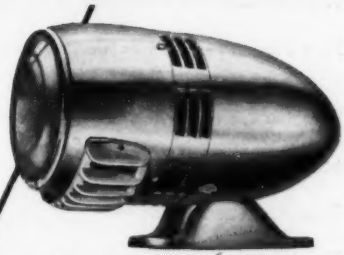
Photo courtesy Goodwill Fire Company No. 1, Reading, Pa.

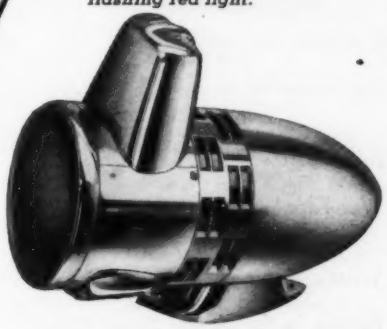
ANOTHER INSTANCE OF *Good Judgment*

When you see a FEDERAL Siren on fire apparatus you can be assured that "good judgment" put it there. You also can be assured it is a siren that is ruggedly yet finely designed and constructed—that it has a powerful and distinctive tone roar, and that it will give long unfailing service with minimum attention.

Investigate the FEDERAL line of sirens. There are many models from which to make a selection. Some are equipped with a flashing red light, others with an oscillating light. Some are coasters; others are double-tone coasters. Select any FEDERAL model and be assured of the maximum in a warning device.



A deep tone, long roll siren with flashing red light.



A Traffik-King Model "coaster" siren with oscillating red light.

WRITE FOR BULLETINS

FEDERAL ELECTRIC CO., INC.

SIREN HEADQUARTERS

8702 So. State Street Chicago 19, Illinois

FIRE ENGINEERING

A Consolidation of Fire and Water Engineering, The Fire Engineer and Fire Protection

CONTENTS

Vol. 97 December, 1944 No. 12

	Page
With the Editor By Fred Shepperd	865
Current Techniques in Fighting Aircraft Crash Fires By J. E. Taplin	867
Cleveland Fire Department Reports on East Ohio Gas Disaster	870
The Liquefaction and Storage of Natural Gas Explained	872
New Haven Firemen Battle Dangerous Gasoline Blaze By Paul P. Heinz	873
Forestry Conservation Service Presents Case for Radio	874
Manufacturers' Announcements	877
Short Cuts and Gadgets	878
The Watch Desk By Roi B. Woolley	879
Questions and Answers	880
The Round Table Post-War Value of Military Fire Training	881
False Alarms	883
War Fare By Roi B. Woolley	884
What's Burning?	894
Persons In the News	898
Pacific Coast News By Bob Greenock	904

FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

Christmas

WORDS were given us that we might properly express our thoughts. But to all there comes a time when it is difficult to find the right words.

● Such a time is Christmas—particularly *this* Chistmas. Tempered with the gratification that the war is being won is our grief over the cost in human lives and the tragedy it brings. It is so difficult to say "Merry Christmas" where there is little but sorrow; where loved ones are absent, and where a certain telegram brings fear to the heart.

● What we would *like* to do is to take each of our readers and contributors by the hand and convey our season's greetings personally. But unfortunately that is impossible and we must resort to cold, unemotional type, instead of the warm personal touch.

● And so, to you, and all of the 'yous' who make up the great FIRE ENGINEERING Family, we send our greetings and best wishes; in the words of Tiny Tim, Dicken's immortal character: "God Bless Us, Every One."

The Publishers

FIRE ENGINEERING

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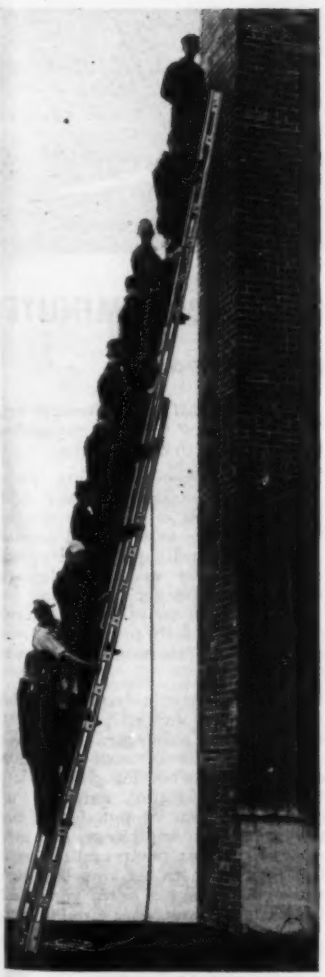
"Specialized Leadership"

Tubular STRENGTH

A New Line *Joins America's First Family of* Fire Ladders



Proving the strength and rigidity of the new Duo-Safety Aluminum; a 2-section beam-ing combined weight of ten men.

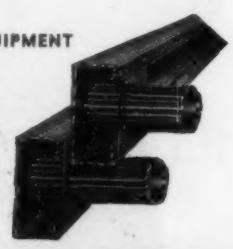
500A Series All-Aluminum

OUTSTANDING DEVELOPMENT IN LIGHTWEIGHT LADDER CONSTRUCTION!

Duo-Safety's ALL-ALUMINUM ladders are back again! Here's that unique, space-saving, over-lapping Series 500A construction. (See cut.) It gives maximum climbing space to the very top rung . . . reduces space required for banking which makes the use of shorter wheelbases on service trucks. It does these things without sacrificing strength or light weight. Duo-Safety's exclusive TUBULAR PRINCIPLE does it! This rectangular extruded Duralumin rail, together with other structural refinements, gives the Fire Chief everything he's looking for, and makes Duo-Safety ALL ALUMINUM a great ladder hit!

SERIES 700A COMPANION EQUIPMENT

This new Duo-Safety channel design is an outstanding development in light-weight pumper ladder equipment. All-aluminum (Duralumin) . . . all around husky construction gives you faultless quality and positive safety! Designed to replace the bulky old type solid side wood pumper ladders.



DUO-SAFETY LADDER CORP., OSHKOSH, WIS.

"Use a Good Ladder or Stay on the Ground"

FMC HIGH-PRESSURE TESTS
AT ENDICOTT, N. Y.

Tests Conducted by Local Firemen

RAGING FIRE KNOCKED DOWN IN ONE MINUTE!

Less Than 70 Gallons of Water Used!

The tests at Endicott, N. Y., are vital to all fire departments, both city and rural. First: they were set up and conducted by the local Chief, and extinguished by his firemen (and it was their first experience using high pressure on fires) — *not by factory representatives.* And secondly: because they showed the real value of FMC High-Pressure Fog under actual fire-fighting conditions.

These were unusually hot fires. The house, which was tinder-dry, was set on fire several times with gasoline and oil.

As the flames rolled up, the *local* firemen moved in with two FMC Fog Fire Fighter Guns. And — *the big House Fire of the Series was knocked down in one minute, with less than 70 gallons of water.* There was no water in the cellar after the last of the 4 fires was out.

Various inflammable liquid fires were touched off and extinguished efficiently with FMC High-Pressure Fog. Those who saw the tests recognized its real value in fire fighting.

That's the surprising thing about FMC High-Pressure Fog. Any good fireman can use it—and *use it effectively*—and use only a small portion of the water ordinarily required and with practically no water damage. Besides that you get into action immediately upon arrival at the fire and the fireman is fully protected against the heat and can move right up to the fire.

Investigate! Get the facts about this new and revolutionary fine FMC Fire-Fighting technique. When we stress the value of and the results obtainable from 600 lbs. gun pressure fog for fire fighting, naturally we base it upon our own design of fire truck, our own experience, our own positive pressure pump and our own technique. There is no question about what you get when you select FMC High-Pressure Fog Fire Fighters.

BUILDERS OF BEAN HIGH-PRESSURE

ACTUAL PROOF OF FMC HIGH-PRESSURE FOG BY ENDICOTT FIREMEN

FIGHT FIRES THE MODERN WAY

High-pressure fog for fire fighting was originated by the John Bean Mfg. Co. a number of years ago. And—since then—a system has been developed which has revolutionized fire-fighting technique.

You get action—*fast*—with the FMC High-Pressure Fog Fire Fighter. This has been proved at thousands of town, rural and airport fires.

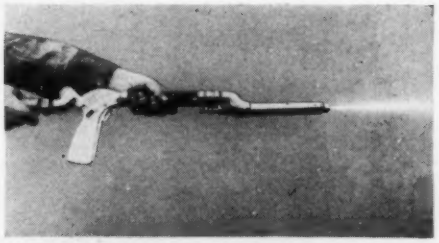
IT'S THE PRESSURE THAT COUNTS!

The FMC Fog Fire Fighter easily maintains *800 lbs. pump pressure*—better than *600 lbs. nozzle pressure.*

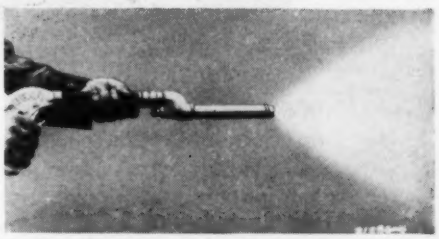
This high pressure gives you a combination of high velocity and finely-atomized fog—just what you need to *cool* and *smother* flame. Every droplet of water is broken up into thousands of tiny particles that can be *"blasted"* into the source of the fire.

THERE'S NOTHING ELSE LIKE IT!

Only the FMC High-Pressure Fog Fire Fighter packs the needed punch to produce and maintain 800 lbs. pump pressure—600 lbs. gun pressure. It's an all enclosed, positive displacement, three cylinder oil bath pump with over 10 years of high-pressure use to prove that it is really a high-pressure pump.



A ONE-MAN JOB! *With pressure on, the FMC Fog Fire Gun practically carries itself and can be poked into cellars, attics or holes in partitions. One man can fight fire with this gun and can handle one ¾-inch hose line easily.*



EASY ADJUSTMENT! *Fireman can hold trigger release with his right hand and adjust barrel with his left hand. By turning the barrel slightly, he can change the flow from a straight stream to a wide fog pattern, for close-up work. The only gun that meets all requirements.*

800 LBS. AT THE PUMP! *That's a pretty tough job for any unit. But —the FMC High-Pressure Pump is built to deliver and maintain that pressure. The reason? This pump—built by Bean—is different from all other pumps and is designed especially for high-pressure work by high-pressure pump engineers.*

FMC *Original* HIGH-PRESSURE FOG FIRE FIGHTER

CAN BE MOUNTED ON MOST STANDARD TRUCK CHASSIS

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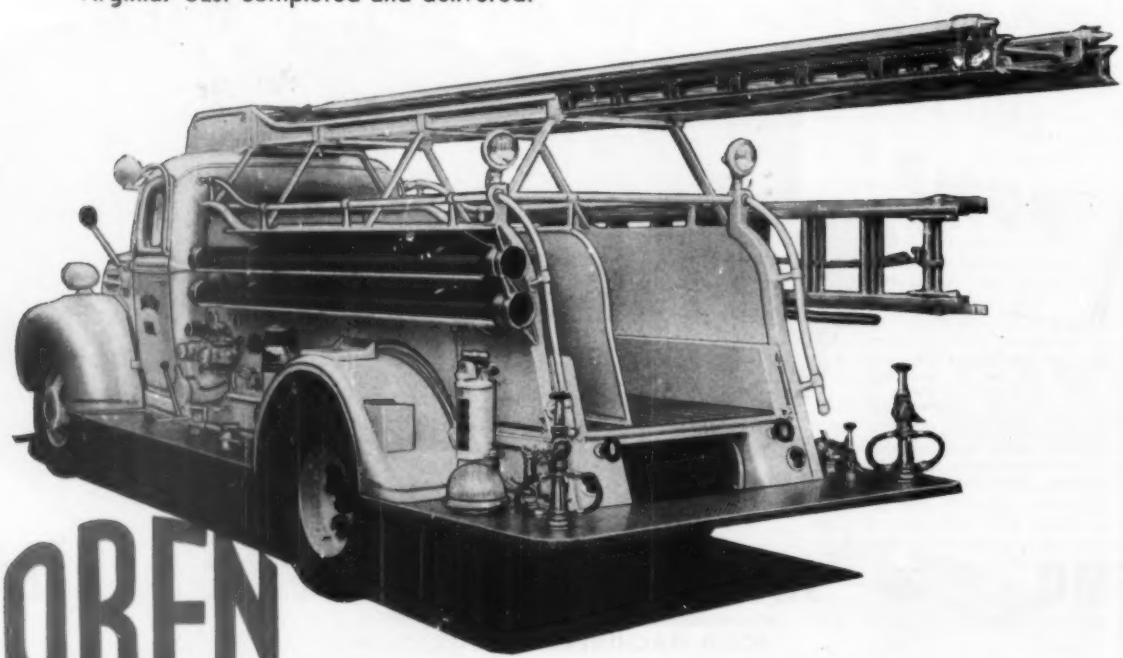
PUMPS . . . FOR OVER SIXTY YEARS

THREE MORE DEPARTMENTS

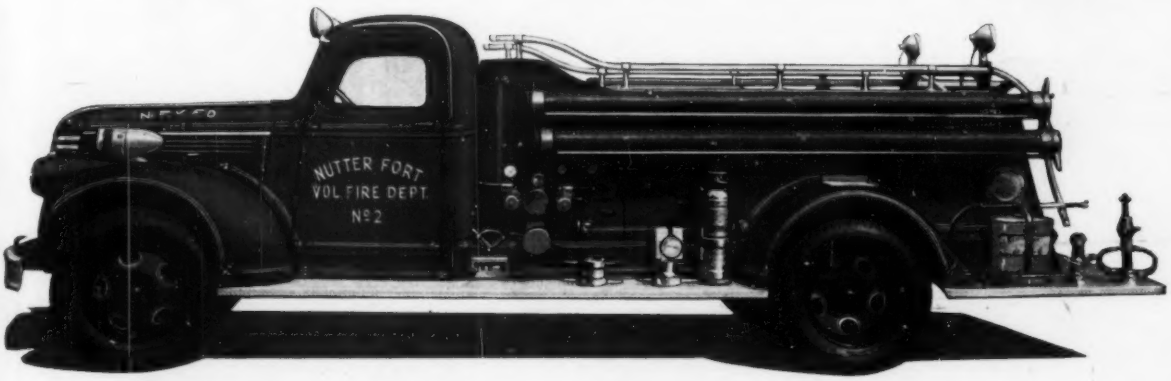
This Custom-Built **OREN** is a triple combination pumper with a 500 G.P.M. Hale Centrifugal Pump and 200-gallon booster tank. It has a 35-foot two-section aluminum ladder mounted overhead and 24-foot extention and 12-foot roof aluminum ladder mounted on side. Equipment mounted on Ford chassis and used at Salem, West Virginia. Just completed and delivered.



OREN

MODERNIZED WITH AN OREN

EACH TRUCK IS BUILT AND DESIGNED TO MEET THE INDIVIDUAL NEEDS OF THE PURCHASING FIRE DEPARTMENTS ON THEIR DESIRED CHASSIS.



These two Custom-Built **OREN** trucks are triple combination pumpers with 500 G.P.M. Hale Centrifugal pumps and 200-gallon booster tanks. Mounted on Chevrolet chassis and used at Nutter Fort, West Virginia, and Westphal Hose Co. No. 5, Martinsburg, West Virginia, just completed and delivered. Safe working pressure of pumps up to 400 pounds.

Built by
THE SOUTH'S ONLY FIRE TRUCK MANUFACTURER

ARMY E NAVY

OREN FIRE APPARATUS COMPANY

ROANOKE, VIRGINIA

Kidde total-flooding system smothers fire in flammable liquid storage room in less than twenty seconds.

BEFORE TOUGH FIRES GET TOO TOUGH

. . . *blast them out with Kidde!*

KIDDE KILLS TOUGH FIRES

In fighting the tough fires—the fast-moving ones that break out in flammable liquids (class B); and the hard-to-get-at types that start in electrical installations (class C)—you've got to smother them fast or they'll spread beyond control in a few minutes.

Ordinary water-type extinguishers can't control these tough fires. But built-in Kidde systems, employing carbon dioxide, will smother them in a matter of seconds. That is why Underwriters' and Factory Mutual Laboratories approve Kidde for fighting *both* these types of fire.

Some of the Kidde built-in systems are so designed that the fire can be automatically isolated, and the room quickly filled with flame-suffocating carbon dioxide. This gas—being dry, inert, odorless and non-toxic—leaves no after-fire mess to be cleaned up, cannot damage any materials; and does not contaminate or otherwise spoil costly processes. In brief, Kidde is one of the speediest, cleanest and most effective fire extinguishers in use today.

So, check this list (at right) now. Does even *one* of these hazards exist in your plant? If it does, write Kidde today. Ask to have a Kidde representative call upon you. He'll be glad to share his fire-prevention know-how with you.

Process Rooms
Ovens
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Dip Tanks
Agitators
Washers
Quench Tanks

Walter Kidde & Company, Inc. • 140 Cedar Street • New York 6, N. Y.

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MACK MEANS DEPENDABILITY...

Every fire is a threat of wholesale damage to life and property. But rugged and reliable fire-fighting equipment can kill a fire fast and efficiently.

And for 35 years Mack has built fire-fighting equipment to do just that. And for 35 years Mack fire-fighters have proved themselves dependable, tough, yet easy to handle.

For sound reasons like these, the alert City of Boston has just added this new 1000-gallon Mack Pumper to its Fire Department.

Mack
FIRE APPARATUS

If your community needs additional fire-fighting equipment or replacements, think of Mack. Remember, Mack Fire Apparatus is backed by the greatest engineering resources in the industry.

MACK MANUFACTURING CORPORATION · Fire Engine Division · Empire State Bldg., New York 1, N.Y.

IF YOU'VE GOT A MACK, YOU'RE LUCKY... IF YOU PLAN TO GET ONE, YOU'RE WISE!

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On the First New Hose You Buy

Specify—

KLEERLINE
COUPLINGS

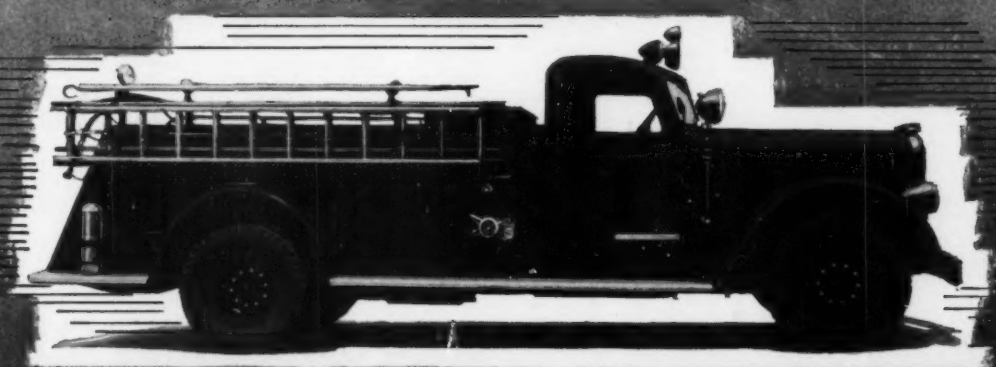
Some day, sooner than you expect, perhaps, you will be able to get as much new hose as you want. Plan now to make that hose serve you better by putting KLEERLINE COUPLINGS on every length. No lugs to catch or drag or wear holes in your hose. . . .

Specify
KLEERLINE

FASTER
STREAMLINED
BETTER
MODERN DESIGN

ANDERSON FIRE FIGHTING EQUIPMENT COMPANY, INC.
407 WEST 36th STREET NEW YORK 18, N. Y.

NUMBER 10 for WASHINGTON, D.C.



QUICK FACTS

About Ward LaFrance Model 85T, illustrated, as modified for the Washington, D. C. Fire Department:

Overall Length: 292 inches
Weight (empty): 13,675 lbs.
Cylinders: 6
Wheelbase: 182 inches
Turning Radius: 33 ft.
Horsepower: 200
Pump: 750 G. P. M., 2-Stage Centrifugal
Booster Tank: 75 gals.
Hose Capacity: 1000 ft. 2½ in.
Ladders: 20 ft. extension
12 ft. roof

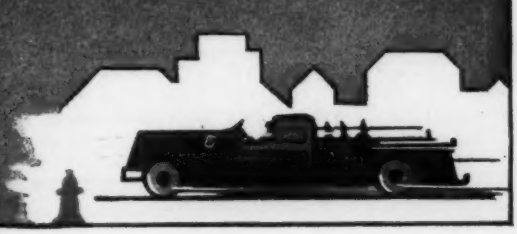
This Triple Combination Pumper recently delivered to Washington, D. C. is the tenth of thirteen 750 G. P. M. and 1000 G. P. M. Ward LaFrance models ordered.

Larger cities such as Washington choose Ward La France equipment on the basis of our ability to meet their engineers' specifications to the letter, and do so with true economy. Smaller communities by the score are also picking Ward LaFrance apparatus. The reason: wide range of basic models, authoritative engineering assistance, plus a reputation for unbeatable stamina and performance.

WARD LAFRANCE

TRUCK DIVISION

GREAT AMERICAN INDUSTRIES, INC. • ELMIRA, NEW YORK



Highland Park—Mich.

knows from long experience what's BEST

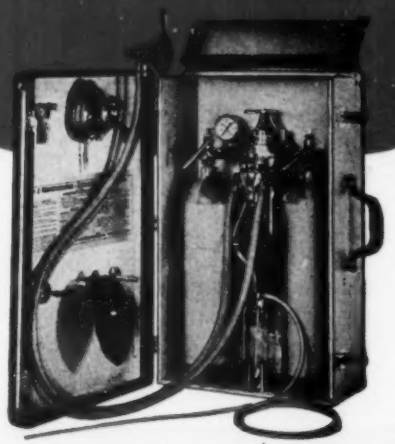
The E & J RESUSCITATOR INHALATOR and ASPIRATOR

FIRST CHOICE IN FIRST AID

The Fire Department of Highland Park, Mich., under the progressive leadership of Chief F. A. Ford, has learned from more than twelve years of experience the value of mechanical resuscitation in general and the E & J Resuscitator in particular.

Their first E & J unit was placed in service in January 1932. It did such good work during the following ten years, another unit—the latest E & J model—was added in 1942. During the twelve years to July 1, 1944, the Department was called to the aid of 387 persons, of which 208 were revived. Since these calls come in most cases as a last resort, the Department feels that this record "speaks highly for the accomplishment of this equipment as a service to the community."

This is another of the many cases where experience has proven E & J dependability.



For further information write to any of our distributors listed below.

E & J MANUFACTURING CO., GLENDALE, CALIF.

Philadelphia New York City Pittsburgh Detroit, Mich. Boston Chicago

3032 W. 35th Ave., Denver, Colorado 5005 Euclid Ave., Cleveland, Ohio

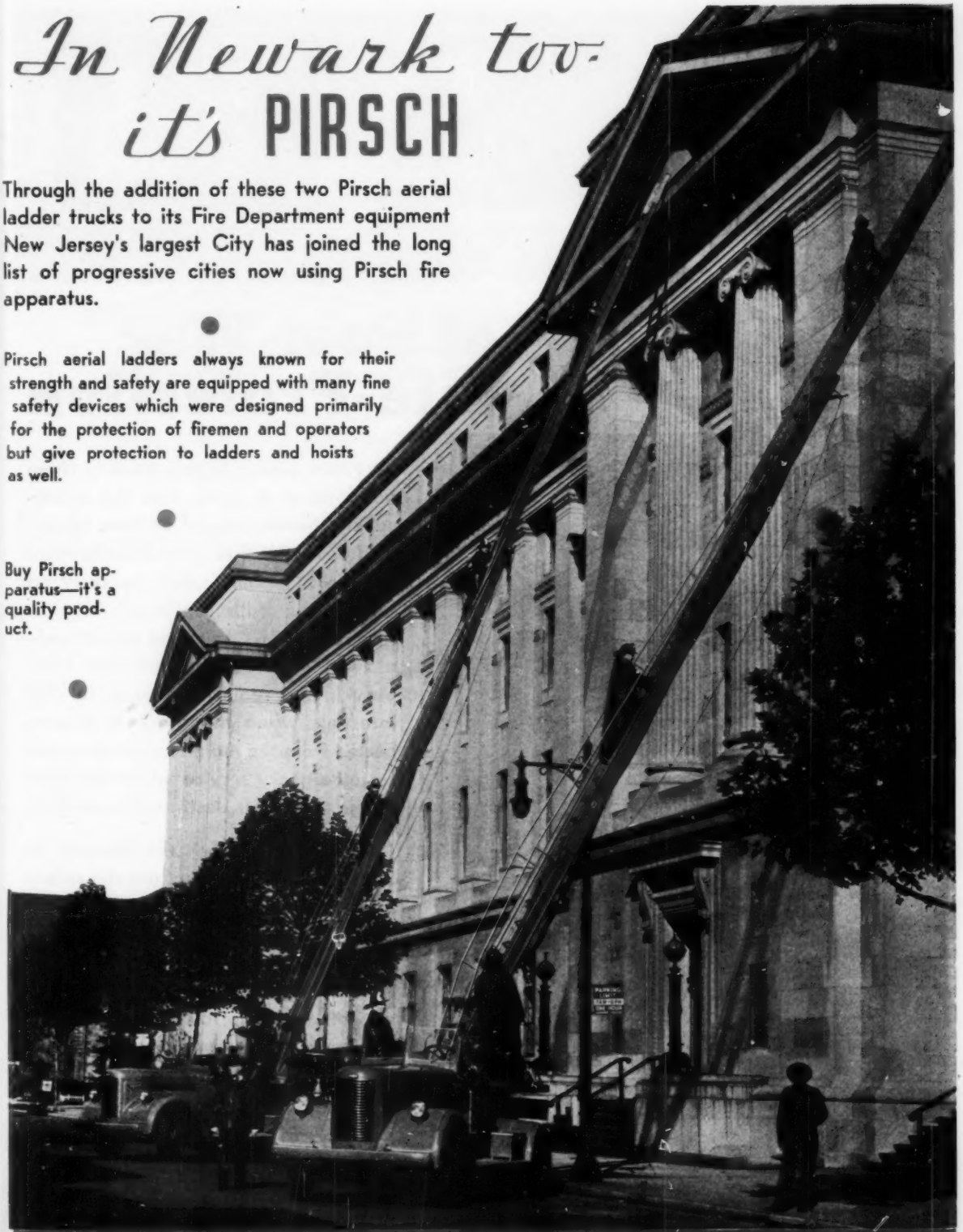
Pioneers and Specialists in Mechanical Artificial Respiration

In Newark too- *it's* PIRSCH

Through the addition of these two Pirsch aerial ladder trucks to its Fire Department equipment New Jersey's largest City has joined the long list of progressive cities now using Pirsch fire apparatus.

Pirsch aerial ladders always known for their strength and safety are equipped with many fine safety devices which were designed primarily for the protection of firemen and operators but give protection to ladders and hoists as well.

Buy Pirsch apparatus—it's a quality product.



PETER PIRSCH & SONS CO. KENOSHA, WIS.

"BUILDERS OF AMERICA'S FIRST ALL-POWERED AERIAL LADDER TRUCK AND AMERICA'S FIRST 100' AERIAL LADDER"

In the gas-filled mine, Scott Air-Pak will help in emergency repairs, in rescue missions.

Firemen will depend on Scott Air-Pak to enter smoke-choked structure.

Repairing and cleaning storage tanks will be made safer, more efficient with Scott Air-Pak.

Preview

# of Post-War Life-Protection

★ Fliers whose missons carry them upwards of 6 miles into the stratosphere literally "travel on their lungs." And Scott *Air-Pak* (Portable Oxygen) Equipment enables them to carry on their duties with continuous respiration protection. Commonly called "walk around bottles", Scott Air-Pak units provide the requisite oxygen for the intervals when the mask is disconnected from the main oxygen line, and for emergency service when the main oxygen supply is destroyed in combat.

A combat necessity! Yet inherent in Scott Air-Pak equipment are the safety principles, the design, the practical know-how which point to important industrial applications in days to come. Plans are already in the making! Look to Scott for tomorrow's portable oxygen equipment.

Scott Air-Pak Unit—a light-weight, portable oxygen cylinder and precision regulator of the demand type —in active service on many fronts.

SAFETY EQUIPMENT DIVISION

ARMY E NAVY

Scott

AVIATION CORPORATION

Lancaster, N. Y., U. S. A.

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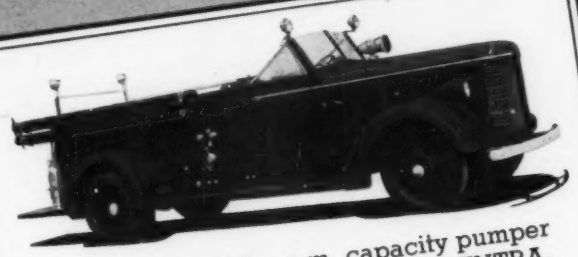
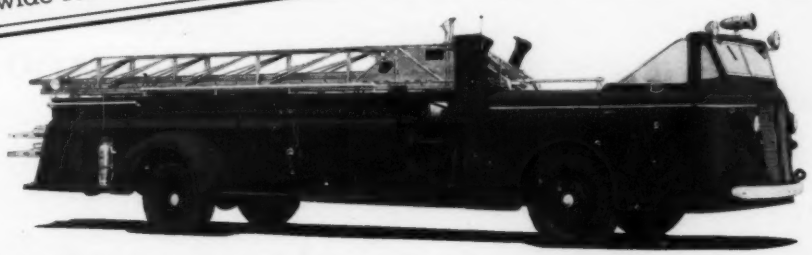
WHEN FIRE PROTECTION IS NEEDED... AMERICAN-LA FRANCE* CAN FILL THAT NEED



TYPE 500-a 500 g.p.m. capacity pumper with 170 H.P. motor-2 stage CENTRA-FLOW PUMP. Built in conventional design with wide running boards.

The World's Finest Fire Engines are built in every type and capacity. Built to meet the exacting emergency demands of the fire service.



MODEL 4-85 a 4 wheel aerial with all the strength, stability, and ease of maneuverability of tractor drawn type with less length requires to house. American-La France all steel aerial ladders have a sturdy strength with speed and smoothness, never obtained with the wood ladder.

American-LaFrance factory built motors and pumps insure performance with reserve.

Write for detail specifications on type you require.

METROPOLITAN-1250 G.P.M. Modern streamline pumpers with open type seating; or 4-5 man closed cab; or 7-man canopy type cab.

* LA FRANCE-FOAMITE in Canada

AMERICAN-LA FRANCE-FOAMITE CORPORATION

ELMIRA, NEW YORK, U. S. A.

LA FRANCE FIRE ENGINE AND FOAMITE LIMITED

TORONTO, 9, ONTARIO, CANADA

LUNA PARK, CONEY ISLAND—$500,000 LOSS

THE GAMEWELL COMPANY
Newton Upper Falls, Massachusetts
In Canada: Northern Electric Company, Ltd.—Montreal

FIRE ENGINEERING

DECEMBER, 1944 VOL. 97. NO. 12

With the Editor

Wrong Number The strike of telephone workers which started November 17 in Dayton and quickly spread to 27 other Ohio cities and to Washington, D. C., came as a shock to the public and to the fire service. It was one of the most senseless of all the strikes that have plagued this country's bid for victory in the greatest war in history. As far as we know, it was the first strike of the nation during the war in which the vast majority of strikers were young women. It was a strike which elicited little sympathy, even within organized labor circles.

This is the first time in many years that there has been a serious strike in the telephone service. Always deplorable, and always a threat to the nation, it is particularly inexcusable at a critical period like the present. It is possible that, as the strikers contended, they have a real grievance. If so, it certainly could be removed by less drastic action than deserting their jobs and calling fellow workers out "in sympathy"—a sympathy that can only be construed as for the enemy and for the welfare of a nation at war.

It is reported by Ohio Bell that "all government, military and emergency calls were going through without delay," although the company broadcast appeals by radio to subscribers to use their phones only in emergencies.

The strike is ended—but the threat to the nation is not. The fire service cannot help but view this situation with concern, if not alarm. It doesn't matter if normal "emergency calls" went through; there is nothing "normal" about a multiple alarm fire, or major disaster such as only recently visited Cleveland (where over 800 Ohio Bell employees went out). The point is that if persons engaged in public services so vitally essential to the nation's very existence, can go on strike, regardless of the reason, just where will it all end?

It is common knowledge that there has been, and still is, considerable unrest in some segments of the fire service. There has been one strike in the service, that in Montreal, but it is to the credit of the heads of the organized fire service that common sense and cool-headedness have thus far prevailed and difficulties have been settled "within the family." There were cool-headed leaders among the telephone union organizations, some of whom counselled against the strike and whose wise counsel was ignored and flaunted, but the rank-and-file have flaunted good counsel and even violated "no strike" pledges.

Is it any wonder, therefore, that forethoughthful municipal officials view the future with some trepidation?

Costly Smokes On October 15, 139 people —73 men and 66 women —appeared in Brooklyn, N. Y., court to answer to summons issued them in an intensified drive against smoking in retail stores. Each of the 139 could offer no excuse acceptible to the magistrate sitting in the Court, and paid a fine of $10 or spent two days in jail. The fines were accompanied by stern lectures from the magistrate.

At the same time, the city's drive, waged by the Fire Prevention Bureau, was given publicity in the press, Commissioner Patrick Walsh being quoted as saying: "We are not doing this to inconvenience Christmas shoppers but to protect them. There is no greater life hazard in any business than there is where women

and children are crowded together in stores, particularly during the present holiday season. Panic is always a great potential danger where people are congregated. Add fire to the panic and you have a terrifying condition. I can say that in all the letters which come to my desk in the course of a year the one subject that is emphasized more than any other is that of smoking in department stores."

Hard upon the heels of this crusade, some 47 summons were issued in the Borough of Queens and 105 in Manhattan —15 of them to women. In addition to this, 21 persons felt the hand of the law for smoking in subways and were given their choice of paying $5 or spending two days in jail. All but one paid.

According to reports, the two most popular excuses offered by the defendants were that they did not see the no-smoking signs, and that they did not know of the local law passed last year to prohibit smoking in retail stores. Incidentally, all were first-offenders and were warned by the magistrates that it would go hard with second-offenders.

This is a worthy drive but, as with fire prevention week, one wonders if it shouldn't be more than a yearly spasmodic spurt; if it shouldn't be an all-the-year-round effort! If it isn't, smoking in large stores will again become commonplace and as the "No Smoking" signs become flyspecked, and are removed and as store and fire department authorities relax efforts to enforce the law, which incidentally does not prohibit smoking at any particular time or period, but prohibits the evil in any store which has more than 25 employees.

A visit to the larger department stores, and the crowded five-and-ten stores during any shopping period will almost certainly disclose men and women smoking. Frequently, the lighted cigarette, cigar or pipe, is held over pyroxylin or other highly-flammable merchandise, simply waiting a hot spark to start a possibly serious fire and panic. Behind the counters are women, inexperienced and untrained in the way of fighting fire and preventing stampedes, and who cannot be counted upon to set a good example of cool-headedness to their customers in the event of emergency.

Add to this the fact that many stores, particularly the basement type, have too few exits, with center-store stairways; exit-signs, if any, not prominently displayed; decorations of highly flammable nature; first aid fire appliances so located that in a crowd they are utterly inaccessible, and the result is potential tragedy.

What's the cure? Every metropolitan fire chief knows the answer, but with shortages of personnel for inspections; with magistrates and judges unwilling to back up the fire service with enforcement of the law and prosecution of the guilty; with disinclination on the part of store owners and occupants to institute reforms, or even to cooperate with fire prevention authorities, and with people themselves more interested in "bargains" than in thinking of protecting their own lives, many chiefs hesitate to take hard-boiled action.

Our Christmas Wish for You

"Many merry Christmases, friendships, great accumulation of cheerful recollections, affection on earth, and Heaven at last for all of us."

Charles Dickens

Fred Sheppard

Current Techniques in Fighting Aircraft Crash Fires

Latest Methods Developed by Airport Crash Fire Fighters Suggest Procedures for Municipal Fire Services

By J. E. TAPLIN

THE need for equipment and trained firemen for safeguarding lives at airplane crash fires is apparent. Credit must be given the Navy and Army Air Corps, by and with advice from consultant engineers, for development of apparatus and equipment presently used. The evolution of such dates back about ten years, the major part since the war began.

Fires resulting from airplane crashes are predominantly gasoline fires and must be treated as such. Their control has been handicapped by having to transport all extinguishing agents to the crash, consequently equipment has been designed to get the greatest value from extinguishants carried. Municipal departments will not have this difficulty, at crashes occurring within its city limits, because it is to be assumed that adequate quantities of water will be available.

Extinguishing agents presently used are water, carbon dioxide, foam—dry powder to a limited extent—and carbon tetrachloride. The latter is of little value at a crash fire, being better for motor fires. The relative values of the others are about equal. There are certain conditions when carbon dioxide is preferable, but generally dependence is placed on water, either as high pressure fog, low pressure fog, or foam. Pump pressures of from 500 to 700 pounds are used for high pressure fog, which results in a much finer and more effective spray for controlling petroleum fires. The large quantity of carbon dioxide carried on the Cardox truck (6,000 pounds) is equally good, but smaller quantities (300 pounds or less) have little value.

Apparatus and Equipment

A brief description of existing crash equipment, pump capacities, and quantities of extinguishing agents carried, and a delineation of fire fighting methods known to be effective, will better enable the Municipal Department to plan the use of equipment they now have for the control of airplane crash fire.

The several classes of crash fire fighting equipment are outlined in the accompanying table.

Of the foregoing seven pieces of apparatus only three use carbon dioxide, either wholly or in part; all others rely on water in the form of fog or foam for extinguishment. The class 110 is essentially a foam producing unit, but carries 200 pounds of carbon dioxide. The classes 125 and 135 are primarily high pressure fog trucks, however, by mixing foam solution with the water, either foam or high pressure foam fog may be utilized.

Foam produced by crash equipment is of the mechanical type, and differs from chemical foam in that the bubbles are filled with air instead of carbon dioxide. This is accomplished in one case by mixing a foam-fixing solution with the water in the tank, and pumping through special nozzles wherein air is introduced, forming foam. In the other method plain water is pumped through the delivery lines, and by means of a pick-up tube the foam solution is mixed with air at the nozzle. This is known as the Hip Pack Foam Producing Unit, and will hereinafter be referred to as the "Hip Pack."

Most firemen are familiar with the application of foam for extinguishment, and many have had considerable experience with the use of fog both in general fire fighting and in controlling petroleum fires. It is believed, however, that a full understanding of how and why water fog extinguishes gasoline fires will enable the fire fighter to use it more efficiently.

Water fog extinguishes fire by *absorption of heat* and by *wiping* or *sepa-*

Current Apparatus Used to Fight Crash Fires

	Pump			Tank Capacity			Hose	
Class	Type	GPM	PSI	Water Gals.	Foam Gals.	CO_2 Lbs.	Type	Lines
100	Rotary	100	100	375	30	200	½" HP	1-100
110	Centrifugal and Rotary	100	100	Pre-mix Foam 250	.. ..	... 200	½" HP 1½" CRL	1-100 2-100
125	Piston	60	600	300	20	...	¾" HP	3-100
135	Centrifugal	60	350	300	20	...	¾" HP	3-100
150	Water expelled by reduced CO_2 pressure	...	125	500	.. ..	6000 ...	1½" 1 " HP	2-100 2-100
155	Centrifugal	250	600	1000	..	...	¾" HP	3-100
1010	Trailer Piston	35	650	150	..	...	1 " HP	2-100

Speed and Skill Plus Use of Latest Type Aircraft Crash Fire Fighting Equipment Results in Rescue of a Lieutenant Pilot After Crash of His P-38 at Pittsburgh Municipal Airport

rating flame from fuel. The maximum extinguishing value of water is obtained when fully converted into steam, therefore the finer the spray the more steam produced, with resultant efficiency. Comparing two spray streams delivering equal amounts of water, the droplets in the first being just one-half the diameter of those in the second, it will be found that the water surface of the former is exactly twice that of the latter. Because of the greater water surface of the finer spray the rate of heat absorption is relatively faster. Although the heat absorbed by two equal quantities of water should be the same, the first stream is much more effective than the second. Why? Because *more water has been converted into steam,* and in *less time.* The rate of heat absorption by water is proportional to the surface exposed; hence the greater the surface the faster the absorption.

Applying Spray and Fog

The second extinguishing effect of water fog on burning gasoline is the application and advancement of a *fog-front,* whereby the flames are *wiped off,* or *separated from* the burning liquid. In most cases the fog stream should be applied and advanced laterally instead of head on, because a wider front is thus presented. Figures 1 A and B will illustrate:

In Fig. 1 A below the fog nozzle should be adjusted so the spray will reach entirely across the burning liquid, then advanced slowly and steadily to the right. It should be held horizontally about 14 inches above the burning surface, so that the *fog-front* touches and spans the burning area. Figure 2 illustrates the elevation of the nozzle.

Presenting the fog stream head on as in Fig. 1 B is not so good because the fog-front is not broad enough, and it is more difficult to prevent flash backs.

If gasoline spills over a large area one fog nozzle will be entirely inadequate.

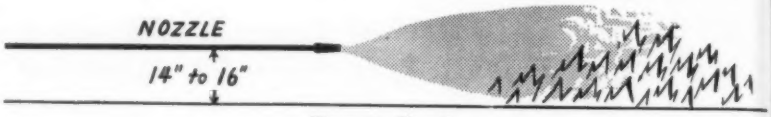


Figure 2—Elevation

How to use two fog nozzles is shown in Figure 3.

Station the two fog nozzles so that the fog streams meet at the edge of the fire at an angle of about 90° forming a wedge; then advance until the fire has separated in the center, after which the fog streams should be rotated outward sweeping the flame from the fuel. This procedure originated from the necessity for opening a path through which rescues could be made, but has proven quite as effective for extinguishment.

For gasoline spills of considerable magnitude not less than four fog streams are necessary for effective results. This ground plan, Fig. 4, indicates the relative positions of the four nozzles.

In the evolution, Fig. 4, Company No. 1, places the first two streams in

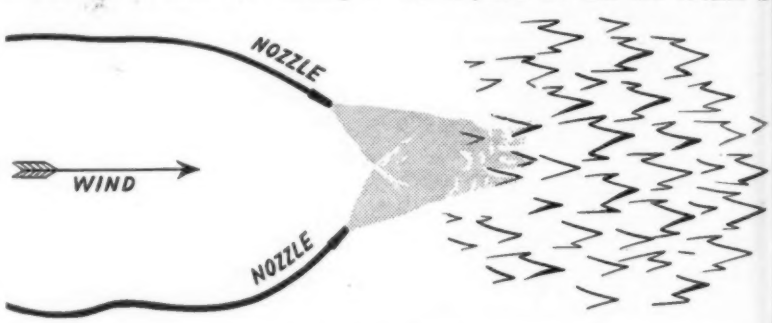
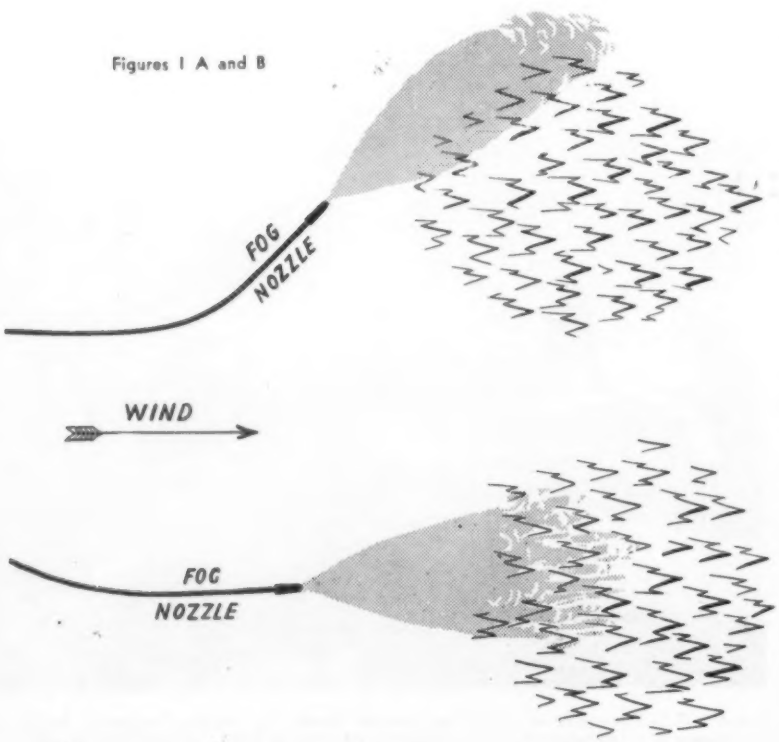


Figure 3—Ground Plan

service as indicated in Fig. 3. Company No. 2 then places the second two streams, parallel with, about three feet outside of, and four or five feet to the rear of the first two streams. The secondary streams thus provide protection against heat for the primary nozzle men. All streams should be held horizontally at the 14-16" level, until the rescue men are ready to enter the rescue path. The inside streams should then be trained to the *right* and *left* of the rescue men between the *hip* and *shoulder,* while the outside streams are held at the 14-16" level. To effect extinguishment, inside and outside streams should be maintained parallel and moved slowly outward until flames are swept from the burning surface. *Should flash backs occur* raise the streams, swing back to center of burning area, lower to proper position, and proceed as before.

Figures 1 A and B



Beware of Flash Backs

Due to the high volatility of gasoline flash backs are apt to occur, and every precautionary measure should be taken to prevent them. Foam applied immediately behind the fog streams will serve that purpose by blanketing unburned fuel. Any type of foam producing equipment will suffice. Even the 2½-gallon foam extinguisher, if several are available, can be used to cover a large surface. The dry powder foam generator is effective if it can be placed in service without delay. The hip pack foam unit is most adaptable for this purpose. While few are now in the possession of City Fire Departments it is believed they will soon be available. The proper application of foam is shown in ground plan Fig. 5.

The foregoing illustration indicates the foam stream applied on the ground

at the point P just outside the burning area. Thus the foam flows over the fuel exposed.

One might wonder why foam alone is not used for the control of airplane crash fires. Foam applied as a blanket absorbs little heat, and as at many crashes, there is a need for effecting rescues, water fog is used for protecting both rescuers and the rescued. It will be noted in Fig. 3 that a pathway completely filled with water fog has been opened through the fire, through which rescues may be accomplished with comparative safety. The primary objective is to open and hold this rescue path until rescues have been made, after which extinguishment is completed. Then, too, water fog is useful for cooling and excluding heat from fuselage where victims may be trapped.

The airplane crash company or crew is preferably composed of six men. Their duties and the number of their working positions, as shown in Fig. 6, are as follows: Captain or Crew Chief, No. 1; Pump Operator, No. 2; Nozzle Men, Nos. 3 and 4; Rescue Men, Nos. 5 and 6.

Note that all nozzle men take position on the inside of their respective lines. These men are subject to more punishment from heat than other crew members, and the necessity for proper protective clothing is apparent. In the foregoing illustration the rescue men are in position to enter the rescue path. The Captain remains where all operations can be properly supervised. The crash kit, containing tools for forcible entry and the release of victims, has been opened and conveniently placed by the rescue men.

In the matter of protective clothing, the asbestos suit has long been in use for fighting major oil field fires, but for crash fire fighting it has not proved so practical. Space will not permit a full discussion of the relative values of the asbestos suit versus bunker clothing. It will suffice to say that most crash crews prefer regulation bunk out suits, gloves, and helmets. The rescue men must be provided other protection for head, face and neck, the most popular being an asbestos hood, or cape, constructed to fit over helmet and drop below the shoulders. One such hood is now being manufactured under government specifications for use at army air fields, and no doubt one similar will soon be available for municipal use.

The foregoing dissertation will serve to acquaint the municipal fireman with the fire fighting methods and equipment that have proven most effective at airplane crashes. However, these must not be taken as the last word in crash fire fighting. Much is yet to be learned, and the fire fighter, who can think for himself will contribute much to that phase of fire department work.

(To be concluded in the next issue)

Editor's Note: Mr. Taplin, author of this article, was formerly Chief of the Blackwell, Okla., Fire Department and Secretary of the Southwestern Association of Fire Chiefs. Later he was connected with an airport fire force. The foregoing article is compiled in part from his address before the last session of the New Mexico Fire School. The opinions expressed are naturally Mr. Taplin's own and do not necessarily represent those of the publishers of this journal.

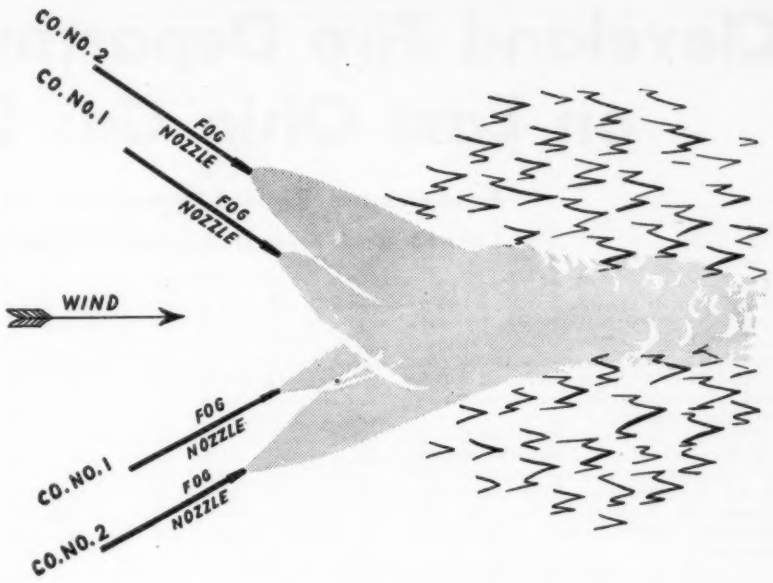


Figure 4

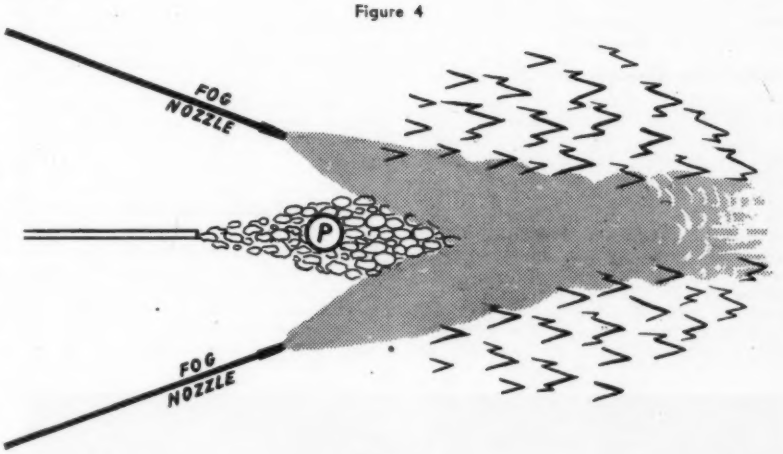


Figure 5

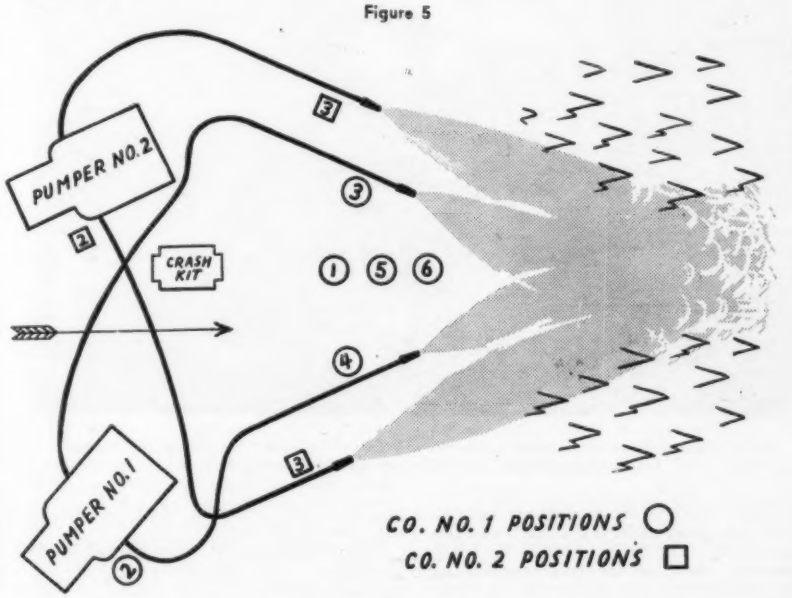


Figure 6

Cleveland Fire Department Reports on East Ohio Gas Disaster

Supplemental Revised Information on Causes, Losses and Fire Department Operations

THE task of totaling up the losses in dead, injured and property in Cleveland's East Ohio Gas Company tragedy is about completed and little remains to complete the history of the unusual disaster but the final formal reports of the numerous investigating agencies.*

The first such report—and the one in which readers of FIRE ENGINEERING will no doubt be most interested, is that of the Cleveland Fire Department made through its Bureau of Fire Education, Emmet H. Byrne, Battalion Chief, Commanding.

Chief Byrne's report is published almost in its entirety, even though it reiterates certain particulars in our initial account of the disaster.**

Initial Fire Department Operations

Report from Captain A. Bahler of Engine Co. No. 19 who was on duty in quarters about ¼ mile in a Southwesterly direction from the center of the fire said that their attention was attracted by a strong wind which rattled the windows in their quarters and seemed to shake the building. They immediately ran outside and were met by a blast of hot air and could see flames up over the tops of the buildings between them and the fire.

He went back inside, called the Fire Alarm Office and told the operator to pull Box 1346 at East 55th St. and St. Clair Ave., and make a 2-2 Alarm to the box. The Company started to leave quarters, but the fire had traveled so fast he stopped the apparatus in front of quarters, went back in and tried to contact the Fire Alarm Office again. The time box was turned in at 2:43 P. M. Signal 2-2 at 2:45 P. M.

By this time every fire alarm box in the area of a mile or two was turned in and telephone calls were swamping the Office causing considerable confusion and some delay in his being able to contact the Fire Alarm Office again. He finally made contact and ordered a 5-5 Alarm turned in and gave instructions for directing the responding companies to proper locations to fight the fire. Time of Signal 5-5 was at 2:46 P. M.

The company then left quarters and responded in a Northerly direction to a location on East 55th St. as close to the fire as possible. By this time Chief Officers and other companies were arriving on the scene. Calls were sent in for additional help and the companies present were placed at strategic locations attempting to stop the spread of the fire.

The Second Flash

About 20 minutes after the first flash, a second flash went up apparently from the second tank when it ruptured, sending tremendous heat waves, flames and smoke hundreds of feet into the air. There was no loud report of an explosion, just a terrific rush of flame, hot gases and smoke.

This flame and hot gases spread in all directions. The outside edges of the rich gas mixture in the center of the gas concentration would ignite upon reaching the proper mixture with air and burn so rapidly that it was continually spreading to, and, dissipating the heavier concentration of gas in the center with air. This seemed to create a rolling heat wave in all directions. Some of this heat seemed to carry up over buildings close to the fire and then drop down some distance back and ignite buildings some distance away.

When the tanks ruptured, the rock wool insulation became saturated with the liquid gas. The rock wool was scattered all over the area and considerable of it in small pieces was carried by the heat waves long distances from the center of the fire. These pieces acted as fiery torches and landed on building roofs and other combustible material, starting a large number of additional fires. Live sparks and embers were also carried from burning buildings to areas some distance from the fire.

Chemical Plant Threatened

To the Northwest of the tanks were a group of small homes and 75 feet to the West of the last home a chemical plant was located where a considerable amount of dangerous chemicals and gas was stored. The fire extended by radiated heat over a space of about 1,500 to 2,000 feet of vacant area including a wide street and railroad right of way and communicated to these homes. This fire in itself was a major fire and companies had to be dispatched to fight it and keep it from reaching the chemical plant.

The U. S. Coast Guard Fire Boat C. G. 64022 F, under command of Commander James, DCGO (PS), Lieut. Kretchmar COTP and Chief Engineer C. R. Hoskins, CBM was pressed into service and under direction of the Fire Department Officers did some very efficient work in assisting in keeping this fire from reaching the chemical plant.

This fire had gained tremendous headway before the City Department was able to get companies to work on it. Houses on both sides of the street were burning fiercely, high tension electric wires were down, blocking the street and necessitating exceptionally long hose layouts to reach the fire. The Fire Boat was located about 2,500 feet from the fire, they laid out 2,000 feet of 2½" line and wyed 2 lines from that, one 600 feet and one 500 feet and with ¾" nozzles and 150 pounds engine pressure they had 2 very good streams.

Partial View of Area Devastated in Cleveland's East Ohio Gas Co. Holocaust. Firemen Overhauling Ruins and Extinguishing Smouldering Fires.

* Hearings have been completed, and tentative conclusions reached by the investigating committee composed of ten laymen and engineers appointed by Mayor Frank L. J. Lauscher; however, no report has been released at this writing. The National Board of Fire Underwriters advised that a complete report is in preparation to be released in December.

** See original account in November, 1944 FIRE ENGINEERING.

This fire was stopped before reaching the chemical plant.

In the area South of the tanks, gas accumulations in various sewers, in underground electrical conduits, well-holes, basements, buildings, or other depressions were continually exploding, blowing manhole covers many feet in the air, blowing up pavement all over the area, rupturing water lines, sewers, electric service, blowing out hundreds of plate glass windows and residence windows, partially demolishing some and completely demolishing other buildings causing many fires and injuring many people including 26 firemen, none of whom was injured seriously. Manhole covers were blown out of manholes as far away as 3,500 feet.

These gas accumulations in the sewers would become ignited in some way; they would start with a sudden hiss, then a rush of flame and hot gases would come from the manhole, followed in a very few seconds by a terrific report of an explosion underground which seemed to ignite all the gas accumulated in that area, buildings and all. These explosions were happening very often.

One of these explosions blew up the pavement under a fire department pumper putting it and the fire hydrant it was connected to out of service.* Several minutes later a second explosion occurred in the same location blowing a crater in the street 25 feet deep 30 feet wide and about 60 feet long. The pumper is about 25 feet long; it dropped into the hole, rear end first and the front end was even with the street level. The force of the explosion broke a big hole in a large intercepting sewer, ruptured the water supply and underground electric system.

One Half Square Mile Area Involved

An area approximately ½ mile square (160 acres) was directly involved by propagation of the heat although we have reports from people who were at least ½ mile distant from the seat of the fire in several directions who felt the heat so intensely that they had to move further away.

An area approximately 1¼ million square feet, 29 acres, was completely gutted, consuming everything combustible including factory buildings, homes, automobiles, public utilities equipment, even destroying or damaging fire hydrants, railroad cars and steel rails.

This fire was handled in about the only effective way a fire of this type could be handled, by placing first line companies as close to the fire as possible, surrounding it to keep it from spreading. Second line companies were put to work on fires that had gained considerable headway in the surroundings outside the area. Third line companies, auxiliary firemen and volunteers were dispatched with apparatus and extinguishers to take care of fires that had started some place in the neighborhood from embers, etc., to cover exposures and to assist wherever needed.

Caution had to be used so as not to extinguish burning gas from open pipes or other sources allowing accumulations that would cause additional explosions.

*See illustration in November FIRE ENGINEERING.

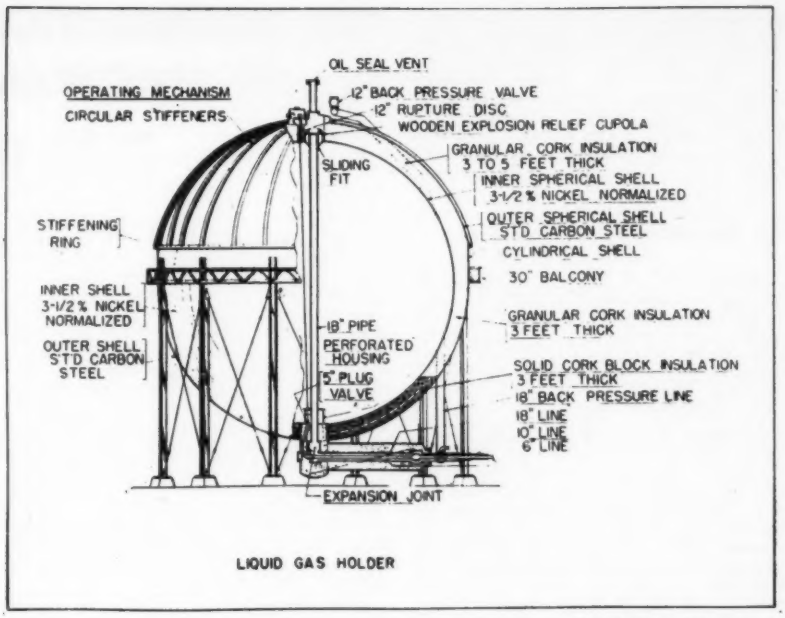


Photo Courtesy "Gas Age"

Cross-Section View of Cylindrical Tank

It was also necessary to detail firemen to direct volunteer searching parties to visit the many buildings in the area looking for bodies. Many were found in a very bad state and were removed by fire, police and military personnel that night (Friday, Oct. 20th).

Up to this writing the board of inquiry into the cause of the East Ohio Gas Co., fire of October 20th, 1944, have been unable to determine the cause of the fire or the cause of the rupture of the first cylindrical tank.

Much testimony has been given by persons who were working for the Gas Co. (or in the adjacent laboratories) a few of whom were near the tanks and lucky enough to escape and from others in a neighboring plant who happened to be looking toward the tanks when they noticed frost clouds flowing along the ground around the bottom of the tank just before the fire started. These persons who were 800 or more feet away warned other workers in the office to leave at once.**

Before they could leave by the front door the fire had started, the heat had reached their building and they all had to jump from windows on the side of the building away from the fire. They all escaped but they had to run for their lives. Several were scorched but not seriously. This building was a well constructed brick and concrete 2 story building but was damaged considerably.

Many theories have been advanced by technical experts as to the cause of the inner tank rupturing, the one most generally heard attributing it to the extreme low temperature (250 degrees F. below zero) under which the gas was stored. This made the metal of the tanks as brittle as glass and the vibrations of the ground caused by heavy trains going by and by heavy hammers in the industrial plants nearby, caused the metal to crack and open up, releasing the contents which vaporized and burned with explosive speed and force, completely demolishing the cylindrical tank first and about 20 minutes later, the spherical tank.

The rock wool insulation (of the cylendrical tank) was carried several hundred feet in all directions; it was more than a foot deep in places and saturated with the gas, it burned for hours like asbestos covering on a gas grate.

Each spherical tank when full, contained liquid gas in the equivalent of 50,000,000 cubic feet of natural gas at normal temperatures and pressures. The cubical contents of the holding spherical tanks is 97,000 cubic feet.

The cylindrical holder contained the equivalent to 90,000,000 cubic feet of natural gas at normal temperatures and pressures and had a cubical content of 176,000 cubic feet.

Both tanks were reported to be filled which means that a total of approximately 273,000 cubic feet, or 2,042,040 gallons of liquid hydro carbon were released.

The natural gas is lighter than air, rating about .61 and the liquid gas is about .4 compared to water.

The weight of the fuel alone in the spherical tank when full was approximately 1,210 tons and in the cylindrical tank, approximately 2,198 tons.

After the fire had been controlled three locomotives were brought to a siding near the tanks and temporary steam lines laid several hundred feet into the regasifying mechanism. After necessary repairs were made the plant was put into operation under this temporary setup, the liquid fuel was regasified and discharged into the city mains, removing this hazard. This work took about a week.

The wind velocity at no time was

**_Editor's Note_: Testimony thus far released by technical investigating bodies tend to confirm the belief that there was a leak in one of the heavily insulated spherical tanks and that this preceded the fire. However, the fact that technicians best qualified to deduce the cause and effect from what they saw of the fire's start died in the holocaust probably means the true cause will never be known.

greater than 11 miles per hour which was very fortunate for all of us. It was from the North and Northeast, blowing the heat and flames against the 2 remaining tanks which were filled to capacity with liquid gas. This presented a very serious hazard, each tank still containing the equivalent of 50,000,000 cubic feet of natural gas, in a liquid state.

Remaining Tanks Threatened

On Sunday, the 2nd day after the fire started and after the fire had been practically extinguished, a smoldering fire was discovered in the cork insulation in one of the remaining spherical tanks. Acting 2nd Assistant Chief, John O'Brien, Assistant Safety Director Louis B. Weinacht with members of Hook & Ladder Company No. 11, Rescue Squad No. 1 and an engineer from the company who constructed the tanks and an engineer from the East Ohio Gas Co., climbed to the top of the tank, removed the manhole cover and discharged the contents of 8 CO^2, 15 lb. extinguishers into the space, sealed it up and left it stand.

Cork Still Smoldering Next Day

The following day the cork was still smoldering. Captain Chas. E. Eisenhart and his assistant Thomas White of the Bureau of First Aid with an engineer from the gas plant mounted to the top of the tank, removed the same manhole cover and dropped several hundred pounds of dry ice into the space where the cork was burning.

Statistical Summary

The following is a summary of the manpower and equipment used and the losses:

27 Engine Companies
7 Hook & Ladder Truck.
2 Rescue Squads.
1 Hose Company.
1 Coast Guard Fire Boat and crew of 20 men.
1 Chief.
1 Assistant Chief.
9 Battalion Chiefs.
10 Pieces of Auxiliary Fire Equipment from Industrial plants, etc.
6 pieces of Auxiliary Fire Equipment from other locations.
235 Regular Officers and Firemen on duty.
150 Regular Officers and Firemen off duty reporting back for duty.
125 Auxiliary Firemen reporting.
70 Industrial Fire Brigade members.
100 Volunteers.
86 Hose Lines laid out.

133 persons dead, 67 of which are unidentified, and an unknown number of missing.

Losses are as follows:
79 Houses totally destroyed.
35 Houses partially destroyed.
2 Factories totally destroyed.
13 Factories partially destroyed.
217 Automobiles totally destroyed.
7 Large Trailers totally destroyed.
1 Large Tractor totally destroyed.

East Ohio Gas Co.; Telephone Co.; Railroad; Fire Department; Western Union; Cleveland Transit Co.; and Utilities, a combined total loss of all of above, approximately $6,000,000.00.

THE LIQUEFACTION AND STORAGE OF NATURAL GAS EXPLAINED*

East Ohio Liquid Gas Plant First of Its Kind in America

IN its early days the natural gas industry was divided into three parts, production, transmission and distribution. Later, a fourth part, closely integrated with all other three, was added due to increasing industrial commercial and consumer demands. That was storage. It was found necessary to store up the natural gas against the peak demands which could not at times be met by the existing transmission systems.

Natural gas can be stored by four general methods: (1) as gas at low pressure in the conventional cylindrical gas holders; (2) as gas in gas holders under medium pressures (5 to 25 pounds); (3) as a liquid at extremely low temperatures in well insulated alloy steel tanks and (4) underground, as gas at high pressures.

The third method, employed by the East Ohio Gas Company, was said by gas experts as late as February, 1944, to be *"still so new as almost to be unique."* Certainly the system was revolutionary.

Stored in liquid form, natural gas occupies only about 1/600th of the space required in the conventional low pressure holder. Contrary to the general belief; gas is liquefied by a combination of refrigeration and compression, rather than principally by compression. In this process, gas is first compressed to about 600 pounds, cooled to about 130 deg. below zero (F.) by ethylene and ammonia, and then allowed to expand suddenly to a pressure of about three pounds. The sudden expansion in heavily insulated vessels drops the temperature to minus 257 deg. (F.).

Storage in well-insulated containers can be effected over long periods of time without building up high pressures; the small quantities of gas which form within the containers during storage are piped off to the distributing system.

First Plant of Its Kind

The first plant to handle gas on this system was that of the East Ohio Gas Company, Cleveland and was put into operation in 1941. According to reports* it had a liquefying capacity of 4,000,000 cu. ft. of natural gas per day and a regasifying capacity of 70,000,000 cu. ft. per day. The plant consisted primarily of (1) apparatus to remove all the moisture and carbon dioxide from the natural gas prior to its liquefaction; (2) six gas engines having a total of 3,400 rated h.p. which supplied the power for compressing the natural gas and the ammonia and ethylene that were used as refrigerants; (3) four storage tanks previously described. and (4) three steam heated special heat exchangers which were used to regasify the liquid gas as needed. Considerable heat (20,000,000 B.t.u. per 1,000,000 cu. ft. of gas) was required to return the extremely cold liquid natural gas to its natural and gaseous state. When the plant was regasifying at maximum rate, 2,200 boiler h.p. were required to supply sufficient steam for the process.

From the outset, one of the most difficult problems to be overcome was the steel for the storage tanks. Ordinary pipe and tank steel becomes brittle at only minus 50 deg. (F.) so special alloys of steel had to be designed. It was found after much experimenting that cork was the best insulator but reports disclose that the cylindrical tank, last to be erected and considered by some to be the chief source of the trouble, was insulated by mineral wool because of the plant's inability to secure cork due to wartime restrictions.

The Liquefaction Process

For students who desire to know, here are details of the liquefaction process.*

There is a simple rule of physics: when you have a gas or a liquid under pressure, and that pressure is released the temperature of the gas or liquid automatically drops.

Ammonia is cooled under pressure. Then the ammonia is brought into contact, in heat-exchanging equipment, with ethylene gas, which has previously been compressed, and cooled by contact with water.

The ammonia pressure is then released, and as the temperature of the ammonia drops, it absorbs heat from the ethylene, which then becomes a liquid.

The cold ethylene is then passed into a heat exchanger with natural gas, and the same thing happens again; that is, the natural gas, which is under pressure of approximately 600 pounds, being cooled to about minus 130 deg. (F.) by the contact with the ethylene, becomes a liquid at that temperature and pressure. Special valves then expand the liquefied gas by reducing its pressure from 600 pounds to atmospheric, and this causes the temperature of the liquid to drop to minus 250 deg. (F.) thus obtaining a liquefied gas at the atmospheric pressure.

A portion of the liquid in the final step returns to the gaseous state, but since it is extremely cold by that time, around minus 200 deg. (F.), it can be put to useful work as a cooling agent, acting on ethylene ammonia, water and natural gas coming in from the field.

The Storage Process

The next step is the storage of the liquid gas. As said, ordinary steel becomes brittle at low temperatures. At minus 250 deg. (F.) it can be shattered by a slight blow, and ruptures even under the stresses of expansion and contraction. The special alloy developed for the storage tanks was said to have a .09 per cent carbon and 3½ per cent nickel content, strong light and ductile; but even with this superior material it

(*Continued on page* 911)

*We are indebted to Gas Age, Robbins Pub. Co., for much of this technical information.

NEW HAVEN FIREMEN BATTLE DANGEROUS GASOLINE BLAZE

Fire Department Reports on the N. Y., N. H. & H. Railroad "Cut" Fire

By Paul P. Heinz, Chief

ON Saturday, Nov. 18th, 1944, shortly before 9:44 A.M., a freight train hauling cars through the New Haven "Cut" between Chapel and Fair Streets, adjacent to one of the main arteries of the city, in some manner piled up and upset a tank car containing 10,141 gallons of gasoline, rupturing the tank, over which several other freight cars piled and immediately caught fire.

This accident occurred in the high-tension zone. The wires carried 11,000 volts and were part of the electrified system operating between Cos Cob and New Haven. The crash pulled down the high voltage wires, which ignited the flowing gasoline.

An alarm of fire from Box 314, located at Union and Fair Sts. at the south side of the "Cut," was received at 9:44 A.M., closely followed by Box 26, State and Chapel Sts., at the north end of the "Cut." Because of the close proximity of both boxes, the first box, located at Union and Fairs Sts., was transmitted.

On the west side of the "Cut" was an elevated viaduct, a private right of way for trolley cars, but accessible for other vehicles in case of emergency. The viaduct was about 35 feet above the tracks in the "Cut" and gave an excellent overall view of the situation to the Fire Department upon their arrival. On the extreme west side of the "Cut," adjoining the viaduct, were several mercantile buildings which faced on State Street, the rear of these buildings completing the enclosure of the "Cut."

Wires Endanger Men

The Deputy Chief, upon arriving, observed the high-tension wires arcing against the rails, and his first thought was the safety of the men. All men were ordered out of the fire area until official word had been received that the current was shut off. This delayed operations for about eight minutes, but the absence of water for this period was not a serious factor because there were no immediate exposures; however, the intense heat from the burning gasoline was increasing at a rapid pace, and fanned by a stiff easterly wind the fire threatened the rear of the buildings on the west side of the "Cut." Three deck-guns were located on the viaduct and heavy streams were direted on burning wood freight cars adjacent to the fire, and a water curtain was formed to cool off the high temperatures in the rear of the mercantile buildings.

A second and third alarm were sent in, and seven Engine Companies and three Hook and Ladder trucks responded, together with the Chief, Deputy and Battalion Chief, and a total of 50 officers and men.

Subsequently official word was received that the high voltage current was "Off," and all companies reporting in were ordered to line-in with fog nozzles and descend into the "Cut" by ladders which were placed by the Truck Companies.

Three 2½" Fog nozzles,* six 1½" Fog nozzles,* together with three deck-guns and two 2½" straight streams were used to extinguish the fire. Three of the 1½" Fog nozzles used the six-foot applicators, while all other Fog appliances used the high-velocity head only. When the Fog nozzles went to work, the three deck-guns on the viaduct were shut down.

Fog Nozzles Effective

The fire originated between two bridges about 600 feet apart. The "Cut" was about 300 feet in width. The flowing gasoline was approaching the underneath area of the Chapel Street bridge when the first Fog nozzle went into action. The flowing gasoline was immediately extinguished, and the men proceeded to fight the fire from this point, advancing their Fog appliances until the entire lee side of the fire was protected by water-fog.

After fifteen minutes of operation with Fog, it was apparent that the fire had already reached its peak; in 25 minutes the burning gasoline was confined to an area of about 30 feet in diameter; and in 40 minutes the burning gasoline was extinguished. Only two small flash-backs occurred during the entire operation. No injuries were reported.

A steel freight car, loaded with merchandise and sealed, toppled over the tank car when the crash occurred, and the intense heat from the burning gasoline warped the only entrance door to the interior of this car. The merchandise inside the car was burning intensely, and the Fire Department used cutting torches to open it. Two torches were used and openings about two feet square were made at both ends of the steel car. Straight streams were used to cool down the burning materials. This operation took about 35 minutes and the fire in the contents of the cars was not entirely extinguished because Railroad officials requested that we leave the area so that their wrecking crew could take over and the main lines be opened for traffic.

Our Department left the scene of the fire about 11:20 A.M. One 2½" line was left with the Railroad workers to wet down and cool, for several hours, the smouldering freight cars and debris. Several hundred gallons of unburned gasoline were left in the tank after extinguishment.

The intensity of the burning was so great that heavy steel towers supporting the high-tension wires were twisted and partially removed from their bases. About twenty feet of the heavy rails were twisted and had to be replaced.

Lessons Learned: (Value of Training)

In June of 1944 the New Haven Fire Department inaugurated a technical training program in Liquid Fire Fighting. Suitable grounds were provided and large open tanks, overhead tanks, enclosed metal buildings, and a crash airplane were erected to simulate the various types of gasoline fires which might

(*Continued on page* 912)

*Rockwood S.G.-40 type.

When a Freight Train on the N. Y., N. H. & H. R. R. Buckled in New Haven the Wreckage Brought Down Power Lines Which Ignited 10,000 Gallons of Gasoline in a Wrecked Tank Car. Ensuing Hot Fire Was Controlled by Liberal Use of Fog Nozzles.

FORESTRY CONSERVATION SERVICE PRESENTS CASE FOR RADIO

F. C. C. Asked to Provide Additional Channels to Improve Forest Fire Control

THE nation's forestry-conservation services, through Committee Three, Panel 13 of the Radio Technical Planning Board, has presented its request to the Federal Communications Commission for radio frequencies for emergency communications.

Committee Three, which comprises some twenty fire control, conservation and radio experts, with Kinne F. Williams, Superintendent, Fire Control, New York State Conservation Department, Chairman, has asked for the following frequencies, claiming that the eleven channels now available to forest protection services, in the 30mc-40mc band are inadequate.

Frequency Channels and Locations Required by Forestry-Conservation Service

1.	From 2.2 mc. to 3.5 mc.	6 Channels
2.	From 30 mc. to 32 mc.	Approximately 10 Channels
	From 35 mc. to 36 mc.	Approximately 5 Channels
	From 27 mc. to 38 mc.	Approximately 4 Channels
	From 39 mc. to 40 mc.	Approximately 6 Channels
	There should be a total of 25 channels in this band.	
3.	From 123. mc. to 162. mc.	12 Channels of proper width
4.	From 310. mc. to 320. mc.	4 Channels of proper width
5.	From 3,000. mc. to 10,000. mc.	An indefinite number of channels for experimental purposes.

In bands 1. and 2. above, consideration should be given to the retention of those frequencies now assigned to it and now being utilized by the Forest Protection Service.

The Committee estimates that the total number of fixed, mobile and portable stations which may operate in the Forest Conservation Service within the next decade may approximate 10,000 units and although it cannot fully estimate the total number the best available estimates of the different classes of radio equipment which the service will require are:

Type of Service	(1)	(2)	(3)	(4)	(5) Total
Portable ..	1166	1076	270	1312	3824
	49%	57%	10%	45%	40%
Mobile	809	698	2192	845	4544
	34%	37%	81%	29%	45%
Fixed	375	95	216	672	1340
	15%	5%	8%	23%	13%
Relay	48	19	28	87	182
	2%	1%	1%	3%	2%
	2380	1888	2706	2916	9890
	100%	100%	100%	100%	100%

Each column represents the estimated number of transmitter units required in various regions. *Column 1.* the Northeastern, based on reports from the States of: Conn., Del., Ky., Me., Md., Mass., N. H., N. J., N. Y., Pa., R. I., Vt., Va. and W. Va. *Column 2.* the Great Lakes, based on reports from: Ill., Ind., Iowa, Mich., Mo., Ohio, Wis. and Minn. *Column 3.* the Southern States, based on reports from: Ala., Ark., Fla., Ga., La., Miss., N. C., Okla., S. C., Tenn. and Tex. *Column 4.* the Western States, based on reports from: Idaho, S. D., Ore., Cal., Wash. and Mont. *Column 5.* is the summarized total of requirements of thirty-nine states.

In its presentation the Committee points out that the lumber industry in 1930 ranked 2nd in number of persons employed; 3rd in investments and 8th in the field of products. Fire is the worst enemy of this great industry. It not only destroys what takes years to create but the loss of watersheds, through fire, results in floods and destruction of water supplies. Fire also takes heavy toll of the nation's wild life.

Cost of Protection

According to the Committee, there are in this country 428,012,100 acres under state and private ownership which must be safeguarded against fire. The present cost to protect such resources is estimated at $18,723,227 annually. In 1942 there were 18,269 forest fires on state and privately owned forest land. They burned 31,277,799 acres, causing damage estimated at $43,823,605.

Fire, states the presentation, can never be eliminated from our forests because about 10% of them are caused by lightning, and "some fire bugs remain at large." Most fires caused in our forests are due to human carelessness. Not only must the nation be prepared to fight these fires, but it must institute all possible preventive and suppression measures.

Although a technique has been developed to successfully combat various types of forest fires and, we are told, specialized equipment has overcome the handicap of improvised tools, until the advent of radio no suitable means of communication had been developed to bridge the gap between the end of the telephone line and the suppression crews; there was no facilities for rapid communication between the secondary observation post and patrol and the primary observer or dispatcher. There were no means by which the fire boss could disseminate quickly information to the scattered forces along the fire lines for the purpose of removing them from a dangerous situation or to transfer crews to reinforce a hot spot on the fire line. Lacking radio service, there was no adequate means to communicate between the fire boss over a fire line in a plane and crews on the fire line and there was no adequate method by which crews on the fire line could call for reinforcements if needed.

Radio Essential in Forest Fire Control

During a decade, concludes the request, radio communication has proved to be an essential instrument of communications in forest fire control; the missing link to former communicating system. Lacking radio service, we (the forestry-conservation interests) would be unable today to point to the constantly improving achievements in forest fire control. "If now we are to be deprived of radio service or provided with insufficient channels to afford suitable communication when all the States adopt radio service, plans which have developed during more than a decade must be abandoned with disastrous results to our economic welfare because modern forest fire fighting methods are dependent upon the continued and the reasonable use of radio communications.

Gasoline Fire Burns Truck, Building, Trailer in Santa Monica.

Threatening to explode and destroy surrounding beach property, this truck and trailer loaded with 6,100 gallons of casinghead gasoline blaze furiously after the trailer overturned and caught fire when the driver swerved to avoid collision with an automobile. A two-story restaurant and an apartment building at right background were damaged by flames which shot out more than 100 feet.

Richard E. Vernor Addressing the Members of the Memphis Rotary Club during Fire Prevention Week.

Dick Vernor Guest of Memphis Rotary Club

Richard E. Vernor, Manager of the Fire Prevention Department of the Western Actuarial Bureau and Chairman of the Fire Department Instructors' conference held annually in Memphis, Tenn., was a guest of the Rotary Club of that city during Fire Prevention Week.

Mr. Vernor stated that the nation is not winning the home-front battle against fires. "The national estimated fire loss in the last twelve months, ending August 31, was $412,000,000. In 1932, the national fire loss was $235,000,000," Mr. Vernor said.

In the past, fires have killed more Americans than were lost in battle, Mr. Vernor added. "During the past twenty-five years more have died by fire than the total killed in World War I and the Civil War combined. Since 1900, fire has killed almost half a million people, resulted in property loss of fifteen billion dollars."

"The causes of fire are faulty physical conditions and faulty human behavior," Mr. Vernor said. "The fundamental reasons for the great industrial losses have been quick war-time expansion and inferior materials used because of haste. Large areas are subject to one fire with the large values not segregated."

Mr. Vernor advocated cooperation with all existing agencies, whose objective it is to prevent fire waste.

He praised the Memphis Fire Department, headed by Chief Connie O'Sullivan, which has won the National Award for Fire Prevention four times, and has won the all-year-round award for the Inter-Chamber Fire Waste Contest, sponsored by the U. S. Chamber of Commerce twice.

"The community, as well as the Fire Department, has a job to do," Mr. Vernor said. "It is to be accomplished through municipal agencies, public buildings, fire ordinances, building codes and public fire protection.

"Public agencies can educate the people. Individual business and industry has its responsibility.

"And of prime importance is a person's own job in the home. In 1942, 322,000 houses were destroyed by fire. Normal care and dilligence can prevent this great fire waste."

High Pressure Fog Demonstration

A demonstration of the use of high pressure fog in controlling fires was staged at Endicott N. Y., on October 30 by the John Bean Manufacturing Company in the presence of about two hundred visitors from fire departments in New York and neighboring states.

Tests included the extinguishment of fires in a two-story frame bungalow and involving inflammable volatiles in an open pit. Inflammable liquids included acetone, gasoline, naphtha, thinner, furnace oil and engine oil in quantities from two hundred to five hundred gallons.

Clem Smith Makes Change

Clem Smith, Indiana State Fire Marshal, resigned his post, which he has held for over twelve years, to become second vice president and chief instructor of the Police & Firemen's Insurance Association. Clem has been a director of the organization for some time. He fills a vacancy caused by the death of the president, John C. Loucks, former chief of the Indianapolis, Ind., Fire Department.

Prior to beginning his new duties we understand, Clem took a month's leave of absence to close up the affairs of the Indiana State Fire Marshal Department. His work as fire marshal has brought him national prominence.

The Police and Firemen's Insurance Association writes insurance for police and firemen over the United States; its home offices and Clem's future address, are 221 East Ohio Street, Indianapolis, Indiana.

Montreal Auxiliary Firemen Form "Bell Club"

An organization to be known as the Montreal Auxiliary Firemen has been formed for the purpose of aiding local regulars in any emergency and fostering affiliation with similar groups throughout Canada and the United States.

The Montreal Auxiliary Firemen organization plans to continue the present working agreement with the local fire department when the government releases the present civilian defense units from their obligations in the city and district. Membershp will then be confined exclusively to the "Fire Buffs" (yes, Canada has adopted the American slangology for the kink-chaser and apparatus-follower.)

Among the objects of the new auxiliary are the collection and preservation of documents, photographs, relics, relating to the history of fire fighting, and the perpetuation of the memory of the fire fighter.

Two-Story, Five-Room Bungalow at Endicott, N. Y., with Fire at its Height. Photo Was Taken just before Fire Fighting Operations Started. Sixty Gallons of Water Were Used in Extinguishing the Fire.

Chief Stephen Porter, District of Columbia Fire Department, Congratulates Lieutenant Sydney G. Carter, Former Member of His Department, at Presentation of Navy-Marine Medal. Vice-Admiral Russell R. Waesche, Left; Chief Porter, Mrs. Carter, the Hero's Mother, and Lieutenant Carter

Ex-D.C. Fireman Wins Navy-Marine Corps Medal

For heroic action in battling the blazing gasoline-laden SS Gulfbelle, whose ammunition boxes were exploding, following a collision with another tanker, SS Gulfland, off the Florida Coast on October 21, 1943, Coast Guard Lieutenant Sydney G. Carter, a former member of the Metropolitan Washington fire department, was awarded the Navy and Marine Corps Medal by Vice Admiral Russell R. Waesche, Commandant of the U. S. Coast Guard. The presentation was made in the latter's office, with Chief Stephen Porter, of the District of Columbia fire department and Mrs. Carter, the Lientenant's mother looking on.

When the Gulfbelle and the Gulfland, both loaded with high octane gasoline, collided with loss of over 80 lives, Lieutenant Carter was ordered to the scene to assume charge of operations. He descended alone into the ship's burning hold and fought the fire, risking his life near a magazine of three-inch ammunition, some of which already had exploded from the heat. He became overcome by the smoke, but was revived in ten minutes and resumed charge of operations.

For 24 hours after the main fire was extinguished, other blazes broke out periodically. During the three days the fire raged, Lieutenant Carter and his crew of 12 Coastguardsmen faced the danger of ammunition and magazines exploding.

In addition to the award from Vice Admiral Waesche, Lieutenant Carter was cited by Rear Admiral Monroe, Commandant of the Seventh Naval District.

Subway Riders Learn About Extinguishers

New York subway trains are showing 6,000,000 daily riders some fire extinguisher intelligence. The photograph reproduced here is carried as a filler in the unsold advertising spaces in the cars. It tells the passengers what not to do with a fire extinguisher. It is one of a series of "Reader Interest" cards that give the flavor of variety to the run of the mill car cards.

The "Designs For Living" series of cards embrace a wide scope of subjects. Subway riders who get weary of their morning or evening newspaper while racing through the underground tubes of the Metropolis may find relaxation and entertainment coupled with good housekeeping hints about home, personal attire, cooking, shaving, sleeping, decorating the sun parlor, salvaging paper and fats and what have you.

The fire extinguisher card appeared during the Fire Prevention Week. It says:

"Don't keep it on a high closet shelf, nor hide it behind brooms and mops. . . . Do place your extinguisher low, and where it can be reached in an emergency."

JERRY DALY.

Firemen Oppose Overtime Pay!

Opposition to extra pay makes news these days, and that happened in Cleveland when an ordinance to pay police and firemen in cash for overtime during the recent East Ohio Gas Co. fire met surprising oppositon from the Fraternal Order of Police and the Fire Fighters' Union.

The measure was introduced by Councilmen E. L. Pucel at the request of Safety Director Frank D. Celebrezze, who suggested the men be compensated in cash instead of equal time off as is granted under existing regulations because of the manpower shortage.

Louis S. Nemeth, president of the Fire Fighters' Union stated: "We appreciate the action taken in our behalf and the thoughtfulness of Councilman E. L. Pucel. However, we feel sufficiently compensated by being able to serve our chief (James E. Granger) and to share in the great job he did. We only hope that in so doing we were able to relieve some of the suffering and pain of those loved ones of the unfortunate victims of this great disaster."

The Commissioner has stated he wouldn't push the ordinance if the men opposed it.

Chief Frank Owen Dies

Frank A. Owen, for the past forty years Chief of the Streator, Ill., Fire Department, died suddenly on November 7 in the fire station. He was first appointed a fireman in 1901, and three years later was promoted to the post of chief. His wife and two sons survive.

DESIGNS FOR LIVING
by Effa Brown
IF YOU BUY
A FIRE EXTINGUISHER
DON'T keep it on a high closet shelf, nor hide it behind brooms and mops...
DO place your extinguisher low, and where it can be reached readily in an emergency.
PUBLISHED BY NEW YORK SUBWAYS ADVERTISING CO., INC., 630 FIFTH AVENUE, NEW YORK 20, N. Y.

Poster Used in New York Subways

Manufacturers' Announcements

Davey H. D. Truck Power Take-Off On Crash Trucks

Modern crash trucks on duty in the nation's airports embody many features giving them speed, mobility over rough terrain, and ability to push in close to blazing planes with their monitor and portable nozzles delivering water-spray at pressures of 600 pounds and over, thus providing rescuers and firemen with a protective "waterfog."

Air Crash Truck Equipped with Davey Power Take-off Operates on a "Plane Fire"

Some of these trucks discharge carbon dioxide; some foam under pressure; some a combination of both, with "waterfog." Many of the crash trucks operate with a single motor which drives both the automotive and pumping mechanisms through the application of the Davey Truck Power Take-Off, a product of the Davey Compressor Company of Kent, Ohio.

The ability to transmit power from the truck's engine to the high pressure pumping equipment is said to save the cost of an auxiliary engine and the space it would require in the apparatus at the same time reducing the over-all weight of the truck.

Located back of the transmission as an integral part of the truck drive shaft, the Davey Take-Off can be installed to provide either separate or simultaneous operation of truck and equipment. It is reported that this power take-off meets Army requirements for crash trucks, and is designed to handle power transmission from truck engine to auxiliary equipment in nearly all truck models of 1½ ton or more capacity, with wheel bases of at least 117" for cab-over-engine types and 134" for conventional cab types. Literature describing the Davey Power Take-Off may be had by writing Davey Compressor Company, Kent, Ohio, and mentioning FIRE ENGINEERING.

New Pyrene Subsidiary

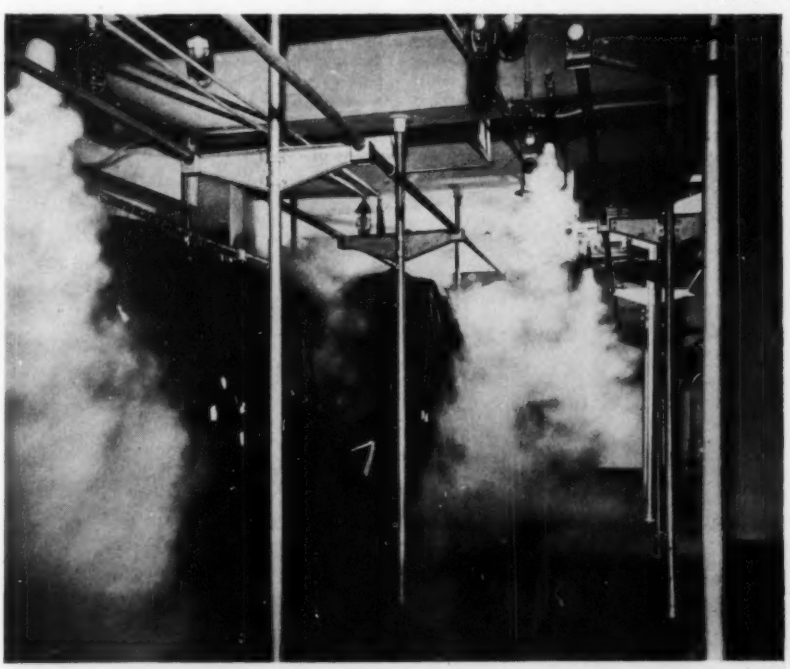
A new industrial research and development organization, the Pyrene Development Corporation of Newark, N. J., has been formed as a subsidiary of the Pyrene Manufacturing Company, also of Newark. The new organization will not only conduct research on fire extinguishing equipment and compounds but also will work in the large field of safety devices and other means of conserving life, health and property. An immediate project is the extension of the development of systems and equipment for employing the mechanical foam principle in fire extinguishment.

The officers of the new subsidiary are Charles G. Durfee, President, Edward J. Waring vice-president and Edward A. Clapp, secretary and treasurer, all officials of the parent company.

Protecting Fur Storage Vaults

Those of the fire service who remember a $3,000,000 loss in a "fire proof" fur storage warehouse in an Eastern city, will be interested in the recent announcement by Walter Kidde & Company that this same warehouse is now guarded 24 hours a day by a built-in carbon-dioxide system.

The installation consists of ceiling nozzles, piped with non-poisonous gas which cannot damage furs and which is released automatically from high-pressure storage cylinders, when heated air actuates a special heat detector. At the same time the gas automatically shuts off ventilating blowers and closes louvres between floors.



Walter Kidde Installation Guards Fur Storage Vault Against Fire

Spurti Enters Canada

Announcement of the incorporation in Canada of Sperti of Canada, Ltd., with headquarters and manufacturing facilities at Toronto, Ontario is made by William H. Albers president of Sperti, Incorporated, Cincinnati, O.

Besides the manufacture of burn ointment, the Canadian affiliate will produce other products, including electronic equipment.

New Potter Fire Escape Bulletin

Potter Manufacturing Company, James Flynn, president, has issued a bulletin on fire escapes—slide tubular and spiral types, which gives useful information including diagrams and specifications for engineers, specification writers and fire officers.

U. S. Rubber Appointment

James E. Power, since 1926 manager of the New York Branch of the mechanical goods division of the United States Rubber Company, has been appointed Eastern sales manager of the division, according to an announcement of Herman A. Everien, general sales manager.

(*Continued on page* 908)

SHORT CUTS AND GADGETS

INTERESTING KNOT BOARDS

An excellent way to display and dramatize the knots and hitches used in the fire service is disclosed by two contributions to "Short-Cuts and Gadgets."

The procedure is to mount the knots themselves, in miniature, on a display panel board. What makes the exhibition particularly effective is the use of miniature fire service tools and appliances with the approved ties for lifting and lowering them.

The board illustrated, was made by A. B. (Skip) Remington of the Sterlington (Ill.) Fire Department. "Skip" is an ex-sailor of the U. S. Navy, a former safety engineer, and instructor of firemanship and first aid at the Green River Ordnance Plant. He has been on the Sterling Fire Department for the past twelve years.

This board shows 76 knots, splices, hitches and bends, 31 of which are used in the fire service. Each application is neatly labeled. An idea of the size of the board may be drawn from a comparison with the designer, "Skip" Remington, shown at its left. We are indebted to Ed' (Dusty) Rhodes of the Eureka Fire Hose Div., U. S. Rubber Co., Chicago, for this contribution.

A somewhat similar display board was exhibited at the last conference of the International Association of Fire Chiefs, Grand Rapids (Mich.) by the Grand Rapids Fire Department. This displayed the mounted knots and hitches used in fire service training by that Department and showed just how they were applied to carefully constructed miniature tools and appliances. Each knot and application was identified by a neat label. We regret mechanical difficulties make it impossible to reproduce the photograph of this Board, furnished us by Chief Edward Palmer.

* * *

CHIEF ALSO USES WEDGES

In the November issue we illustrated a gadget suggested by "Capt. Wm. L." This was a wooden wedge which was used to hold back doors. Coincident with our publishing this item, we received a letter from Walter Strickfaden, Assistant Chief, Columbus (O.) Fire Department, who said:

In this month's issue of FIRE ENGINEERING *(October) I saw and read of gadgets that can be used to an advantage. I have been a member of the Columbus Fire Department for 38 years and in this time, have had the occasion to use different gadgets of various kinds. The one I carry in my turnout is a piece of wood, about eight inches long, tapering from 1/16th to one inch, used as a wedge to keep windows and doors open. I have found this very useful."*

Chief Strickfaden included a sketch of his wooden wedge.

* * *

UTILITY BELTS

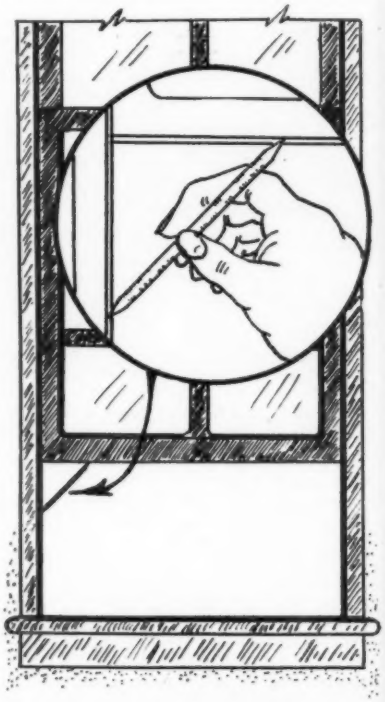
A number of fire departments, particularly in the far West, equip their firemen with strong adjustable utility belts. Most of those we have seen—such as those in the San Francisco Fire Department—are made of tough, pliable leather and have a strong metal hook. They are used in many different ways: to facilitate carrying hose up ladders; fasten charged lines; carry persons in rescue operations, etc.

The editor of "Short Cuts" would welcome descriptions of these belts, and their use.

* * *

TO HOLD OPEN WINDOWS AND DOORS

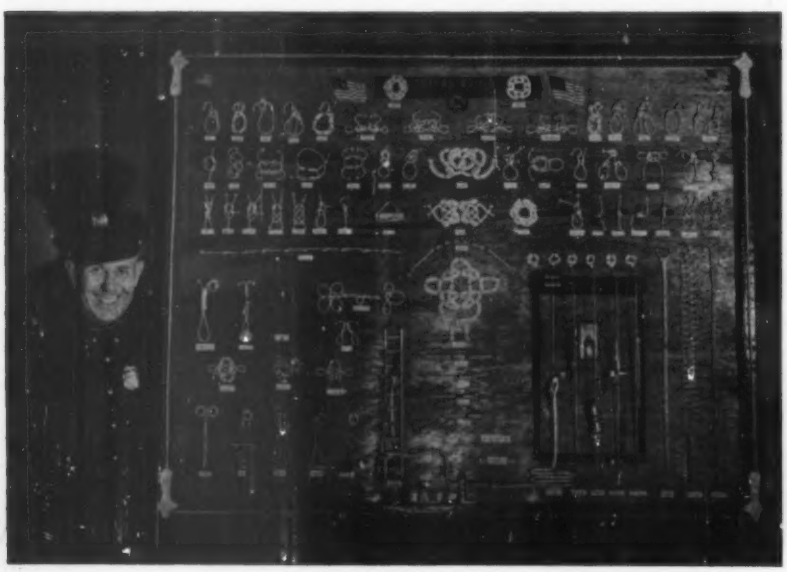
It's surprising how many different gadgets there are for holding open doors and windows during ventilating or, other fire fighting operations.



The latest device illustrated herein, is a small steel rod about the size of a pencil and sharp at both ends. This is used on windows as pictured and it is easy to visualize how it may serve to prop open doors hatch covers and the like.

Our contributor points out that when this gadget is carried in the pocket of a fireman's bunker coat the sharp points should be covered by small bottle corks.

Submitted by H. P. J.
Norfolk (Va.)



FIRE ENGINERING wishes to thank its readers who sent in their many contributions to this new feature, "Short Cuts and Gadgets." This department is conducted by, and for, readers of FIRE ENGINEERING. It is open to everyone. The editors will pay $1 for every idea published—$5.00 if accompanied by a usable illustration. All contributions will remain the property of FIRE ENGINEERING. Address Editor, "Short Cuts," FIRE ENGINEERING, 24 W. 40th Street, New York, N. Y.

Our inquiring reporter overhauls the firemanic news of the day

Sponged—but Not Pressed?

Tom Magner sent in the ironical bit about the hard luck that happened to Fire Chief Joe Tracy, Norwich (Ct.)—

Fire caused by a short circuit in a drying and cleaning establishment did $7,000 damage. But that's only part of the story. When Chief Tracy and his men were "overhauling" after the blaze, one of the Norwich firemen tapped the chief on the shoulder and pointed to a table over in one corner.

"Looks just like one of your suits, boss," he said.

The chief looked the burned garment over. Sho' nuff, it was his! Along, with a top coat it was "kaput." He'd left the garments at the cleaners only a short time before the fire broke out.

* * *

Fire Dog Rides the Smoker

No, this yarn isn't about a new truck —or a new kind of perambulating fire dog—it's about a new form of travel taken by a pet Dalmatian of the Westfield (N.J.) Fire Department.

This young hound — yeah, named "Spot"—boarded the 8:05 commuter train out of Westfield one morning and found his way to the smoking car, rear, where he kibitized and capered among the bridge and poker players.

The dog's natural liking for men at ease, and playing games(?)—says the report—identified him as a fire dog and after the train reached Jersey City, an official telephoned the Westfield Fire Department and the roving Spot was reshipped from that place and ignominiously hauled off the train at Westfield. Captain Frederick Warden of the latter department said the dog was barely a year old, and the son of two veteran Jersey City fire dogs and had gone "on duty" only the week before. Meanwhile both departments are seeing "spots" before their eyes. (Thanks Capt. F. L.)

* * *

Just Too, Too Alert!

Joseph E. Dyer, 24, New York City, colored, made a mistake—two of 'em in fact. The first was, he set one too many fires—and secondly, he made the sad mistake of picking the wrong fire department automobile to tell the occupants of the location of one of the fires.

Dyer started a fire at 2101 Madison Avenue. He'd set a number of others, to which he admitted, and possibly some he wouldn't admit to. But this one evidently didn't get going fast enough for him. For when the red car of Fire Marshal Thomas P. Brophy and Assistant Marshal William Cassidy came along, Dyer stopped it and led the occupants to flames in a rear hallway of an unoccupied tenement, although no smoke or flames were visible from the street.

Marshal Brophy who was en route to Harlem looking for a pyromaniac after three earlier fires were reported as "suspicious," promptly nabbed the 'pyro' and charged him with second degree arson. *"I picked the wrong chief,"* remorsed the prisoner.

* * *

The Month's Orchids

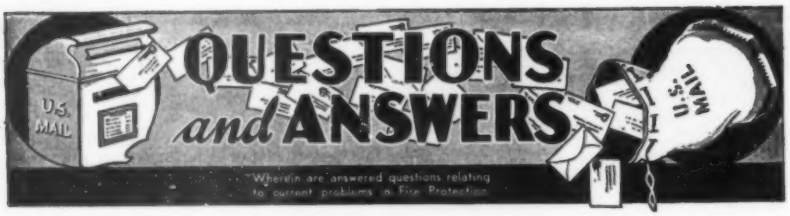
The month's orchids go to a New York City fireman, William Harnisch, who, in Portsmouth (N.H.) was johnny-on-the-job. He remembered his training when he heard the cry of *"Fire!"* as he and his wife were passing the home of Mrs. Leroy Joyce.

Fireman Harnish dispatched his wife to a near-by fire box to sound an alarm and he went right to work on the fire. Result—when the Portsmouth Brothers arrived he had the blaze under control. Damage to the Joyce residence was slight. What's that axiom about the "postmen's holiday?"

* * *

Hot Off the Tape

The City of Sacramento has entered into agreement with Bercut-Richards Packing Company whereby the latter will pay the City $10,000 annually for fire protection. . . . John H. Alderson, Chief Engineer, Los Angeles Fire Department had narrow escape. While responding to second alarm, his car collided with an emergency truck of Los Angeles Railway Co. . . . A trash fire in Muncie (Ind.) communicated to a telephone pole throwing out 400 telephone circuits. . . . Thanks, John L. Freas, Eng. 52, Philadelphia (Pa.), for that bundle of good items. . . . Did you hear that flurry among the bobby-soxers in the metropolitan area of New York when the wayward press announced that Frank Sinatra's father, Anthony, had been made "chief" of the Hoboken (N. J.) Fire Department? For the benefit of the palpitating swooners, we announce that tain't so—Anthony Sinatra was made a "captain." Chief Andrew U. Keller is still in charge. . . . On October 26, New York City experienced a three-alarm fire in a mattress factory which knocked out 18 firemen, bringing to 100 the total number of blazebeaters treated for smoke poisoning and injuries in 72 hours. . . . In Woodbridge (N. J.) a gasoline truck-trailer, carrying 3,000 gallons of gasoline collided with a passenger auto and went up in flames, giving firefighters plenty work. . . . The November meeting of the Fairfield County Fire Chiefs Emergency Plan was held at Beckerle & Co. Hose Company, Danbury (Ct.); Chief Frank Kraemer of Shelton (Ct.) is president. . . . The Fire Chiefs' Emergency Plan of Westchester County (N.Y.) held its November meeting in Pleasantville (N. Y.), president Charles Jahne presiding. The guest speaker was Mr. A. C. Hutson, National Board of Fire Underwriters. South Bergen County (N. J.) sent a dozen chief officers to the meeting to study the Emergency Plan organization and procedures. . . . Plans for the organization of a Suffolk County (N. Y.) council of fire chiefs, to serve as an advisory unit for the County Vocational Education and Extension Board were launched at the annual meeting of the County Volunteer Firemen's Association in Port Jefferson (N. Y.) . . . . Torrington (Ct.) has a new fire truck—its first in more than 20 years To celebrate, they finished it in white in contrast with the rest of city's rigs which are F. D. red. . . . *According to the press, Cleveland (O.) will have its own radio control system shortly. Final approval of plans for installation of broadcasting equipment in Fire House No. 28 have been given. The unit with its own wave length will serve department cars now using 2-way radio through the police radio system.* . . . State Fire Marshal Joseph A. Feldman (O.) says that the fire which flashed through Cincinnati Pencil Co. in late October, killing seven persons, injuring ten others, was apparently caused by lighted match or cigarette. . . . Firemen of Jamestown (N. Y.) had to flush from a street three gallons of gasoline which had overflowed from a taxicab tank. Hope the driver had a "C" card. . . . Twelve were killed, at least 75 hurt in train wreck at Lander (Cal.). Firemen joined with civilian protection volunteers in giving aid. . . . A scottie dog barked an alarm awakening occupants of a 20-room house in Cold Spring (N. Y.)—then perished in the fire which swept the mansion. . . . Walter L. O'Brien, 40, Brockport (N. Y.) went to sleep in his bed with a lighted cigarette. He died in the resulting fire. . . . A blast heard throughout a mile-square area shook a 16-story apartment building on E. 54th Street, New York City, wrecked three apartments, burst water pipes and caused death of Mrs. Erica de Balogh, 31, whose marred body was found in the ruins of the kitchen. Four gas jets of the range were wide open. The (evident) suicide victim had forgotten the pilot light. Firemen quickly put out the resulting fire. . . . Ho hum! a Keokuk (Ia.) notice reads: *"Firemen spent five hours and a half again Tuesday afternoon pumping water on the debris smouldering and burning in the city dump.* . . . A man seeking to rid his bed of bedbugs in Poplar Bluff (Mo.) accidentally set fire to his home. Firemen put out the blaze and the chief said that *"some of the bugs got drowned!"* My my—they musta used a lot of water. (Thanks, Clipper W. B. R.) . . . In New York City 2,000 patrons of the Sheridan Square Theatre exited calmly when fire broke out in a basement storeroom. A calm assistant manager, trained personnel, and muni' fire fighters, and fire drills —and another tragedy averted! . . . When his automobile caught fire in Williamsport (Pa.) a motorist telephoned the fire department *"Please send firemen in a hurry so they can save the tires—the car isn't worth much!"* Both car and tires were saved! (Thanks, Earl Robinson). . . . *Boone (Ia.) Firemen Buy Boots and Bunker Clothing."* Blessus if that ain't a bumper heading. . . .



Maximum Lift When Drafting Water

To the Editor:

We have a tank with three different depths, namely, 40, 60 and 80 feet. Three pumps of equal power and capacity are to start pumping simultaneously. No water is to enter the tank. Original amount only is involved.

Since 33.8 feet is the theoretical height atmospheric pressure will raise water, A claims that all three pumps will lose their water at the same time when the water is lowered to that depth.

B claims that once a pump starts to lift water the weight of the water itself will keep feeding the pump after a depth of 33.8 feet is reached, since the pressure is greater where the depth of water is greater. A claims this pressure due to weight of water is not a factor in lifting water.

B claims the deeper in a well a suction line is placed, the more water can be had, again claiming the weight of water above the suction inlet is the reason.

A claims it makes no difference if the suction line is three feet or 300 feet below the water level. The same amount of water will be pumped providing the supply is constant. Which is right and why?

In your book "Fire Service Hydraulics" in Figure 1 on Page 12, you illustrate on of the characteristics of pressure in fluids. In the explanation you write, "Then the pressure on the various sides due to the weight of water is in the direction shown by small arrows, perpendicular to the wall of the containing vessel." Does this pressure in any way equal the pressure on the bottom. In a tank 10 feet deep the pressure per square inch on the bottom is 4.34 pounds. Is the pressure perpendicular to the sides also 4.34 p.s.i.?

T. J. N.

Answer: All a pump, taking water by suction, can do in any case is to create a vacuum in the suction line. Atmospheric pressure then forces the water up in to the suction line. For the atmospheric pressure under consideration, as stated in your letter, we shall assume that 33.8 feet is the maximum theoretical height which atmospheric pressure will force the water up into the suction line. Thus in any case, the pump could not raise water higher than 33.8 feet by suction. Of course, the distance measured is from the pump intake to the surface of the water.

The depth of immersion of the suction line in water has no bearing whatsoever on the height to which a pump will lift water by suction, for the pressure of the water within the suction line will just balance the pressure of water outside of the suction line and as above stated, the measurement must then be taken from the surface of the water up to the pump intake.

Even after a pump is in operation and discharging water, the maximum height it will still lift water is the same as that at which it will take suction, assuming that all fittings are absolutely tight and that the primer pump is one hundred per cent efficient.

With regard to your second question as to pressures in a fluid at rest, if the pressure on the bottom of the tank is 4.34 pounds, the pressure on the side wall of the tank at the level of the bottom will also be 4.34 pounds. It is important, however, that both points have the same elevation, or in other words, the same depth of water over them. Otherwise, the two pressures would not be the same.

Difference Between Sprinkler Systems

To the Editor:

Will you kindly explain the difference between Class A, Class B and the Junior Automatic sprinkler systems?

There has been a great deal of discussion about the above and I would like to know the true explanation.

Capt. W. C. McE.

Answer: Sprinkler systems are classed on the basis of the hazards they are to protect. These classes are as follows:

CLASS A—LIGHT HAZARD OCCUPANCIES: This class includes buildings housing occupancies such as apartment houses, asylums, club houses, colleges, churches, dormitories, dwellings, hospitals, hotels, libraries, museums, office buildings, schools and tenements.

CLASS B—ORDINARY HAZARD OCCUPANCIES: This class includes buildings housing occupancies such as mercantiles, warehouses, manufacturing, and occupancies, not covered by Class A or C.

CLASS C—EXTRA HAZARD OCCUPANCIES: This class includes only those buildings or portions of buildings housing occupancies where the hazard is severe as determined by the inspection department having jurisdiction.

A junior sprinkler system is a sprinkler system designed to provide a simple, inexpensive system for basements of dwellings and similar locations where not more than three or four sprinklers are likely to operate. The system is directly connected to the service water supply pipe where it enters the building, with the general requirement that such water supply must be of sufficient pressure and volume to properly supply three or four "junior" sprinklers. A smaller office sprinkler is commonly used, usually ⅜-inch, discharging about half as much water as a standard sprinkler but designed to cover about the same amount of floor area.

Wet and Dry Drills

To the Editor:

During nine years as chief of a city fire department (pop. 5200), consisting of three paid drivers and myself as full time chief, and a combination of paid call men and volunteers, we have trained our men on the standard evolutions (using charged lines and simulating fire conditions).

Our city officials have looked upon this (training) program with a great deal of dissatisfaction, claiming that using charged lines doesn't serve any purpose and that using a dry line would do just as well. Further, that opening and closing the hydrant has been responsible for bursting of service lines.

The same objection has been raised in the annual testing of hose. I have repeatedly argued that curtailing these programs would seriously lower the efficiency of the fire department, and deteriorate our hose supply to an ineffective stage. I would like to have your opinion on the matter as I believe it will have a great bearing in clearing up the situation.

Chief J. A. G.

Answer: The only way a fire department can be kept efficient is by continual drilling. This is particularly true where working fires that may give the firemen experience, are few and far between.

As to whether or not charged lines or dry lines are used is purely a matter of local opinion. Some departments drill with charged lines while others use only dry lines, particularly on ladder work. However, even in most volunteer departments where "dry drills" are held it is considered good practice to hold periodic "wet drills" to train men in the use and operation of charged lines.

We have never heard of opening and closing hydrants as being the cause of bursting of service lines. It is not possible to close a hydrant quickly enough to create a severe water hammer. If you had a shut-off on the hydrant as you have on a shut-off nozzle, then the story might be different.

The annual testing of fire hose is an excellent practice. It is far better to have the hose burst during a test than a fire. The only way a department can be sure of the condition of its hose is to test it annually.

For Practical Discussion of Current Fire Department and Fire Management Problems

POST-WAR VALUE OF MILITARY FIRE TRAINING

THE armed forces of the nation, realizing the increasing importance of protecting their properties against fire, have trained many fire fighting units. These units have fought bravely and efficiently the battle against fire during landing operations, on shipboard, in the various military and naval installations, etc. Some of the men making up these units are former members of the fire departments of the country; others are the rank-and-file of the population who have had very little or no chance until the war to take part in fire fighting operations. But judging from the number of letters the Editor has received from this latter group, they are showing not a little enthusiasm about their job. In fact many of these men have asked for instructional material in order to prepare themselves for entrance examinations in the fire department. A number have asked where they can take courses in fire protection engineering after the war when they will be eligible for further education under the "GI Bill of Rights."

Many of the chiefs participating in the following discussion feel that these returned servicemen who have had training in fire fighting will be a great asset to the fire departments of the nation, because of the specialized training they have received. The Army and Navy have introduced many new methods of fire fighting and these men who make up the units are on the ground floor.

Whether or not these men go into the fire service, they will have acquired a great respect for the destructiveness of fire and will constitute a group to whom the plea of the chief for cooperation in fire prevention will not fall on deaf ears. Many chiefs predict that the fire losses of the nation in future years will be lowered because of the fire consciousness of this group.

Readers are invited to send in their comments on this subject, which will be continued in the January issue. The Round Table Editor will be particularly pleased to receive the comments of the men who have been constituting the fire fighting units of the armed services. Address communications to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

Discussion of the Topic

B. W. Weaver, Acting Chief Engineer, Washington, D. C.: When the war is over and the tens of thousands of young men in the armed forces who have received instruction in fire fighting are returned to civil life, their training will be helpful to the fire service in many ways.

Primarily, many of these young men will choose fire fighting as a profession and they, of course, will be excellent material for municipal fire organizations.

All the men so trained by the military will have become "fire conscious" and will have been educated to recognize and eliminate many of the causes of fire.

In addition to our natural joy in having these young Americans home again, we of the fire service will benefit by the specialized training they have received.

Joseph A. Kirby, Chief, Dayton, Ohio: It is my opinion that the many young men in the armed services who have been trained in fire fighting will return home and will be a valuable acquisition to the communities, wherever they may be, both in fire prevention and fire extinguishing. It surely cannot be denied that the training they are receiving should go a long way toward reducing the enormous fire losses which are occurring every day. The mere fact of knowing how to send in an alarm, notifying the fire department of the fire; how to use a fire extinguisher, which type extinguisher to use on the different types of fires, some knowledge of gas masks, etc., should all prove of inestimable value and aid to the communities and the fire departments.

Edmund B. Lewis, Chief, Scranton, Pa.: When the young men who have received instruction in fire fighting while in the armed forces return to civilian life, I believe they should be encouraged to enter the fire department. In so doing, the fire service would benefit by their experience, provided they are within the age limit and are physically fit.

John C. King, Chief, Hartford, Conn.: The training men in fire fighting units of the armed services receive will be of great benefit to these men when they rejoin their city departments, insofar as oil fires and other hazardous conditions are concerned.

Paul P. Heinz, Chief, New Haven, Conn.: There is no question in my mind that the training the men in the armed forces are receiving will be very helpful to the fire service.

The training in discipline and morale alone will tend to increase the efficiency of any department.

Many men in the service are receiving training and instruction in fire fighting in inflammable volatiles and the proper application of fog and carbon dioxide. This training will be of value to all fire departments.

The chemistry of fire is also being taught in many branches of the armed forces. This subject embodies the basic principles of fire extinguishing and combustion. Men having had experience as flame-throwers and paratroopers should make fearless firemen. Men assigned to radio and signal work in the service should make excellent candidates for operators and dispatchers in the fire alarm telegraph division, particularly where short-wave radio transmitters are employed.

In our present age of chemistry and mechanical appliances, together with the common use of inflammable liquids and plastics, the fire service can well use men who have had technical training and practical experience along these lines.

Thomas J. Phelan, Chief, Trenton, N. J.: In my opinion, the training the men in the armed forces receive in fire fighting will be beneficial in that they will be more fire-conscious in their homes and places of employment. Those who are placed in fire departments throughout the country will become apt pupils in the training school and as members of the fire department.

G. R. McAlpine, Chief, Oklahoma City, Okla.: I can see a possibility of increasing the efficiency of fire department personnel by the return of young physically fit men from the service, especially the men that have had certain technical training in fire extinguishment, such as the application of various types of fire extinguishing agents such as fog, foam chemical and carbon dioxide.

The application of these agents is an education in itself, as we all know. The training in fire extinguishing given by the Army and Navy included the technical application of water vapor and carbon dioxide under high and low pressures, and of course, the application of chemical foam.

We recognize the importance of this training as necessary for the efficient

HERE IS THE QUESTION

Today tens of thousands of young men in the armed services are being given instruction in fire fighting.

When the war is over and these men return to civil life, in what way, in your opinion, will their training be helpful to the fire service?

operation of a municipal fire department.

It has been my experience that men who have had military training, are accustomed to discipline, which is an important qualification for the fire service.

All in all, I believe the fire service will have the opportunity of getting physically fit, well disciplined men who will require less training than those who have joined in the past.

James MacGregor, Chief, Edmonton, Alta.: The knowledge of fire fighting that men have received in the armed forces will without doubt greatly assist fire departments, if such men are employed in plants, workshops, wholesale houses, apartment houses, etc.

If these men are within the age limit set by the fire department, they could be employed in preference to men without previous knowledge.

These men who have had training could be of assistance to a fire department in the event of an emergency.

C. C. Killian, Chief, Fort Worth, Tex.: It is my opinion that much valuable training has been received in the armed services that will be helpful especially to the small department that has not had ample chance for real organized training programs. Even so, the larger departments will be able to use this wartime training. Many new appliances have been perfected because of the national emergency. New methods have been conceived, tested and are now being used. The men who are responsible for them can best bring them into use in municipal departments when they are available.

A. C. DuRee, Chief, Long Beach, Cal.: When the war is over and the men in the armed forces who have been given instruction in fire training return to civil life, they, in my opinion, will form the most logical pool of potential firemen from which we of the fire service should avail ourselves in restoring our depleted personnel.

It is quite possible that only a small percentage of these trained men will want to become firemen. The balance, many of whom have seen and experienced the disastrous results of fire, will undoubtedly carry this training on into their civil life, whether it be as an employee in industry, owner of a business, or even as a home owner. I am sure the fire instruction they have received will be so firmly implanted in their minds that this country will see a more fire conscious nation than ever before in our history. I also believe our nation's fire loss record will reflect this fire consciousness.

It is my further belief, that those who have received fire instruction and who will be responsible later for financing fire protection, will have a better understanding and a more liberal attitude in providing funds for the defense of our country from fire.

H. R. Chase, Chief, Miami, Fla.: We have been trying for the past several years to have our civil service laws changed so that we can get eighteen-year-old boys into the fire service.

Our reason for this request was that we can take these youngsters and train them along the lines we follow in fire fighting. When they get older, they have had some kind of training in other fields that sometimes clashes with our methods. We have often found that this training has hampered the progress of the recruit.

The type of training the Army and Navy are giving might be along proper lines. I do not know. But the samples I see at Army and Navy installations do not compare favorably with the training our recruits get in Miami. We still prefer the untrained youngsters.

John J. Tubridy, Commissioner, Buffalo, N. Y.: Fire fighting training received by members of our armed forces will greatly aid our municipal fire departments because more of our citizens will be fire-consicious and in this way will aid in fire prevention work and fire protection activities of our fire departments. In case of large conflagrations these veterans will undoubtedly volunteer help if needed. Their training will be beneficial to their community.

George T. Morgan, Chief, Wilmington, Dela.: I do not believe these men will be much added help to fire departments on their return from the service, except if they are assigned to companies in the oil districts.

John A. Slattery, Chief, Rochester, N. Y.: Primarily I feel that the numerous firemen now in service will bring back to their departments a respect for discipline and efficiency which, properly utilized, will impinge itself with great force upon departmental administration with the resultant benefit to all firemanic operations.

Many firemen have received fire extinguishing and training assignments in the service. These men with their specialized knowledge, particularly in the use of high pressure fog and vapor streams, should be invaluable to their department in the dissemination of practical knowledge of this development in fire extinguishment. They have had opportunities to observe the actual application of such streams in tests as well as in actual operation, something which most firemen have had no chance of appraising because of the lack of necessary equipment.

Frank Egenreither, Chief, St. Louis, Mo.: The instruction in fire fighting given to the men in the armed forces will be a valuable asset when they return to civilian life. It will be a big factor in reducing the useless sacrifice of lives, homes and industries throughout the nation. Being fire-conscious, these men will greatly assist the fire service in reducing the fires that are charged to carelessness.

Clarence W. Brown, Chief, Wichita, Kans.: The men who have been firefighters in the armed service will have learned discipline, which is so essential to an efficient fire department.

They will have lost their fear of fires, as well as their fear of altitude, and both of these factors are important.

These men will have a knowledge of the fundamentals of fire fighting and perhaps their only problem of any consequence will be that of adjusting themselves to the methods of the particular department in which they work.

To acquire men with such training will most certainly be helpful in restoring the departments throughout the country to their normal strength.

(*Continued on page* 914)

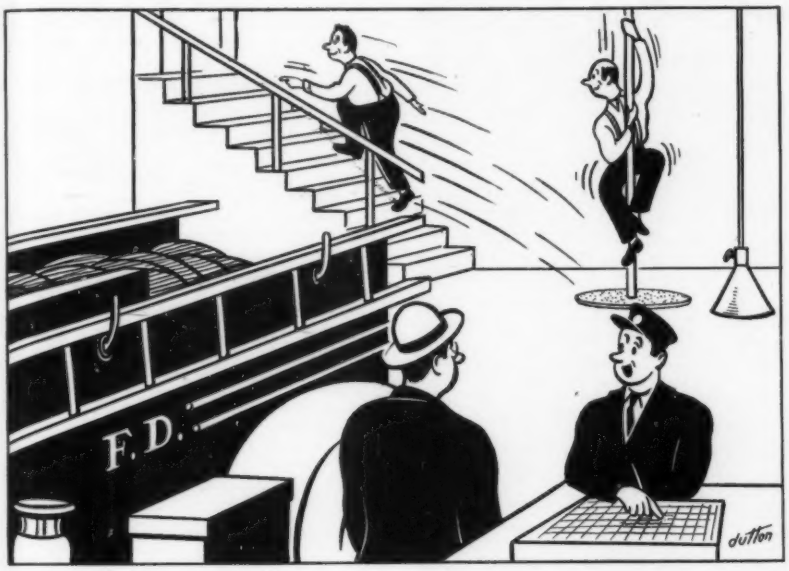
THIS DISCUSSION WILL BE CONTINUED

Due to the large number of Chiefs who contributed their experiences, the discussion on this subject will be continued in the next issue.

Firemen Are Acrobats!

Firemen of Engines 16, 21 and 65 and Truck 7, New York Fire Department, scrambled to safety from sinking barge in East River, New York, on November 21. Collision between three barges reported loaded with 30,000 tons of coal and United Nations vessel, caused small fire on one barge, which filled and sank unexpectedly while men were operating on it. All hands were saved but one got a ducking.

FALSE ALARMS



"No Alarm Came Through—It's Just Their Way of Keeping Warm!"

Highly Imaginative

Admirer: "And which of your works of fiction do you consider the best?"

Author: "My last income tax return."

"How children's tastes do change."

"Yes, indeed. When my two were small Johnny just loved soldiers, and Mary was crazy for brightly painted dolls. Now Mary is crazy about soldiers and John runs after every painted doll he sees."

The farmer took his small son to market. A prospective buyer was examining some cattle, and Johnny inquired, interestedly:

"Why's that man pinching these animals, dad?"

"He's thinking of buying them, son, and he's making sure the're good, sound meat," replied his father. The following day the farmer was busy in his yard when Johnny came running towards him, yelling at the top of his voice:

"Dad, come quickly! The postman's going to buy the cook!"

Thanks!

A card of thanks in a Virginia newspaper:

"We thank the many friends, both white and colored, for their aid. Also the firemen for their promptness in the burning of our home."—The Wall Street Journal.

"What becomes of your lap when you stand up?"

"It retires to the rear and pops up under an assumed name."

1st Girl Hiker: I inserted an ad in our local newspaper recently under a box number for a male partner to accompany me on a fortnight's hiking trip.

2nd Girl: How interesting. Did you have many replies?

1st Girl: Yes, hundreds—but there was a terrible row in the house over it

2nd Girl: Good gracious, why?

1st Girl: Father was one of the applicants.

Hydrant Hunters!

"Why, pardner, my home town is so small that our fire department consists of a hose cart and four dogs."

"What do the dogs do, haul the cart?"

"Gosh, no! They find the hydrant!"

D. L. B. (Oren)

A councilman driving toward town, honked his horn and pulled up to the curb; the young lady got into his car.

As they drove along he said: "When we get to the next traffic light you'll have to tell me whether it's red or green. I am color blind.

The female grinned at him and replied: "I'll sho' say you is!"

Lady, wishing to get rid of undesirable traveling companion before train starts: "I hope you don't mind, but my little girl is just getting over scarlet fever."

Taciturn Fred (solemnly): "It don't matter to me, mum. I'm a-going to commit suicide as soon as we get past the suburbs."

Alice: "I wonder why there are so many more auto wrecks than railway accidents?"

Marge: "That's easy. Did you ever hear of the fireman hugging the engineer?"

Cursing and yelling on a London street was Clancy, holding a doorknob in his fist.

"Them damn Nazis will pay for this—blowing a saloon right out of my hand."

"I Wish This Bird Would Make Up His Mind to Land!"

WHEN YOU NEED PRESSURE

You can depend on a WATEROUS!

When you need pressure — hour after hour — you can count on a WATEROUS. There is no compromise with quality in any detail — that's why WATEROUS Fire Pumps are *dependable!*

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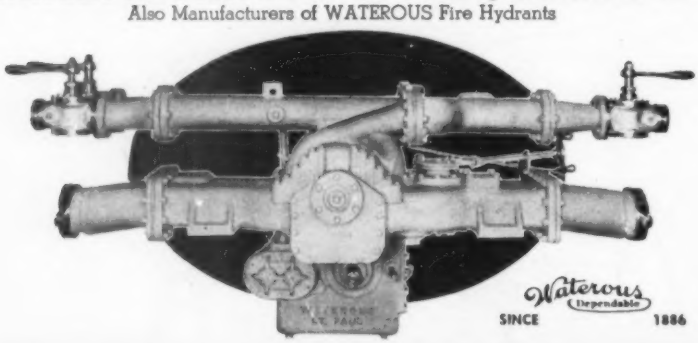


WATEROUS FIRE PUMPS

War Fare

By Roi B. Woolley

"All's Fair in Love—and—"

There's a certain girl in New York City who knows but won't tell the name of the Sad Sac who recently brought out a Dallas (Tex.) fire company on what's reported to be one of its wackiest missions.

This sojer had been studying chemical warfare and he had in his pocket a harmless smoke grenade when he was hiding behind a sofa, from the wrathful and knife-flourishing father of a girl with whom he had been keeping a very late hour. When the family dog threatened to betray his "fox hole" to the irate and murderously inclined "papa," the doughboy pulled the pin of the grenade and laid down an effective smoke screen to cover his tactical retreat.

Mystified firemen arrived to find purple smoke pouring from every crevice in the house and it took a bit of doing before they finally located the seat of the trouble.

Deponent saith not what became of the "culprit" but we kinda wish him well! (Thanks S. F.)

* * *

Are Auxies "Pick-up Men"?

From R. B. Meickle comes an item about a special alarm sent out by the town of Wakefield (Mass.) one night some months ago, to summon the auxiliary fire fighters. When the 25 men arrived, they discovered a brush fire which the "regulars" had been battling for six hours had been extinguished; they weren't wanted to throw water.

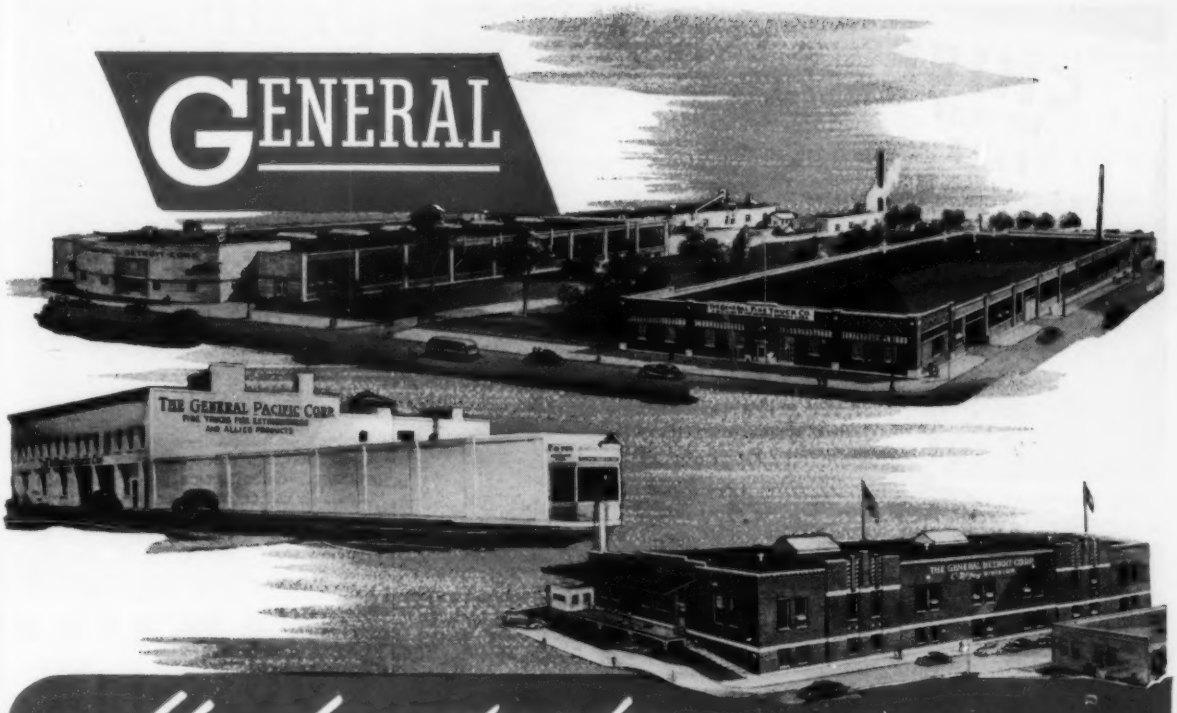
The "regulars" explained that they were so pooped that they sounded the emergency call so that the auxies might roll up the hose!

* * *

Hot Off the Ticker

Reported plans of the War Department to convert Fort Slocum, at New Rochelle (N. Y.) in ritzy Westchester County section of Long Island Sound waterfront, into a prisoner-of-war camp has neighboring towns hot'n bothered. Afraid it might result in some sort of an increase in crime and/or fires, or somethin'. . . . A dud aerial bomb in her front yard (possibly a prank) in Los Angeles drew a large crowd but failed to excite 83-year-old Mrs. Albertine Bohrmann. She appeared briefly on the front porch and called out "Please keep off the grass." . . . Churchill Crocodile Wasp and Lifebuoy are the names given three new British-developed flame throwers which, it's said, have a flame gun to be "fired" around corners. . . . Warned by a mysterious voice on the telephone that a time bomb was ticking its way to imminent explosion in a public locker in New York's Pennsylvania Station, detectives, G men and firemen stood by while the police bomb squad gingerly approached the locker, opened it as gingerly to find—nothing. . . .

During the last hurricane a barrage balloon which came out of the nowhere, played hide and seek with police and firemen, and "hob" with the lighting systems of several localities by ripping up poles and tearing out wires before



Headquarters for FIRE PROTECTION

IF YOU DON'T KNOW FIRE PROTECTION EQUIPMENT, KNOW THE MAKER.

General Detroit has been specializing in the design and manufacture of this type of equipment for more than forty years. In that time it has pioneered in the development of many of the most efficient methods of combating the menace of fire.

Its extensive plant and personnel, located in branches and distributive outlets from coast to coast, are dedicated to the task of reducing the needless waste of life and property that fire creates.

These are reasons why, among leaders in all fields of American industry, General's reputation for integrity of product, dependability of performance, and speed and quality of production is well known.

The experience of these leaders, based on use, convinces them that—

if it's GENERAL *it's dependable.*

THE GENERAL DETROIT CORP.

2270 E. JEFFERSON AVE., DETROIT, MICH.

CHICAGO *Distributors in all principal cities* NEW YORK

West Coast Affiliate: The General Pacific Corp.
Seattle • LOS ANGELES • San Francisco

S-O-S Fire Guard vaporizing liquid fire extinguisher is the only one quart extinguisher in the world with these exclusive features:

- Safety Phlare assures *new* pump action at all times.
- Panic-proof lock releases with right or left turn.
- One-piece cap design for added strength, longer life.
- And nine other outstanding features by "GENERAL."

INDIAN

CLEAR WATER

Fire Pumps

The ease of operation and portability of INDIAN FIRE PUMPS is such that women and children can and have used them to put out all types of fires. Pump throws 30 to 50 ft. pressure stream or nozzle adjusts to a spray.

Yes sir, chief of them all. Small town and big city firemen say that famous, portable *INDIAN FIRE PUMPS* give them the best all 'round service of any equipment. Clear water does the job—no chemicals. Use *INDIAN FIRE PUMPS* on *inside* or *outside* fires. No hose to lay. Just grab an *INDIAN FIRE PUMP* and go to work. How is your supply of these great fire fighters?

The number of INDIAN FIRE PUMPS in use by fire departments, foresters, industrial plants, farmers, etc., is so great that virtually every man, woman and child in this country at some time or other comes in contact with them or benefits from the protection they afford.

D. B. Smith & Co. • 406 Main St. • Utica 2, N. Y.

Pacific Coast Branch: Hercules Equipment & Rubber Co., 435 Brannan St., San Francisco, Cal.

Roy G. Davis Co. 617 E. Third St., Los Angeles 13, Calif. Carse-Conwhit Co. 520 S.W. Pine St., Portland 4, Ore. The Conwhit Co., Klamath Falls, Oregon Mill & Mine Supply Co. 2700 4th Ave. South, Seattle, Wash.

it finally settled down. . . . Oklahoma has adopted an Emergency Defense Plan to handle local disasters. . . . According to City Councilman Edgar W. Wolf, custodian of Federal property, Allentown (Pa.), that city may buy the Federal Government's fire fighting equipment in the postwar period—IF! . . . In Florida, State Treasurer and Fire Marshal Ed Larson, claims to have available for the state's public schools 3,500 portable hand-pump OCD extinguishers, released to the state by that organization. . . . It is said that 559 auxiliary firemen have completed training in Kansas City (Mo.) and 90 are on "regular duty." . . . Out of Detroit's 7,500 auxiliary firemen, "many hundred" stand ready to answer the call. . . .

* * *

Some Folks Have the Luck!

The month's Ripley comes from Philadelphia (Pa.)—J. U. O. reporting—and recounts the story of a tractor-trainer, bearing twenty tons of high explosives which smashed into a tiny one-man house of a park guard.

The crash awakened the driver of the truck, who said he had dozed. It knocked the guard out of the door and a sandwich out of his hand. But the explosives didn't explode.

The driver backed up his load of Chaos, and drove away.

There *is* a Divinity!

* * *

Some Folks Don't!

From Albany (N. Y.) comes a report about a Japanese flare which burst into flames in Bethlehem Central School at Delmar (N. Y.) and necessitated hurried evacuation of 400 pupils. Joan Osborne, 14, was treated at Albany Hospital for cuts.

The flare, brought to school by a pupil who has a brother in the Pacific war theatre, was being shown at a social studies class when it was accidentally dropped. It had been believed to be a dud. It rolled about the floor and struck the Osborne girl.

Extent of the fire damage was not given. (Thanks, Jim McM.)

* * *

FROM OVERSEAS

The N.F.S. Fire College

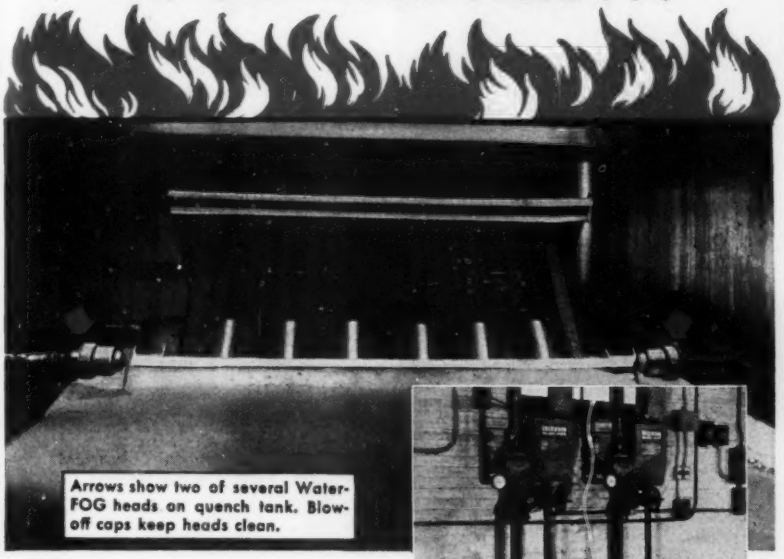
In answer to the question from J. M., Norfolk (Va.) "Has the British fire service a fire college," the answer is Yes. The National Fire Service College was organized in September, 1941. Its third anniversary was celebrated October 20, 1944.

William Scott, K. C. Fire Marshal of Ontario, Canada is now in the British Isles on an official mission.

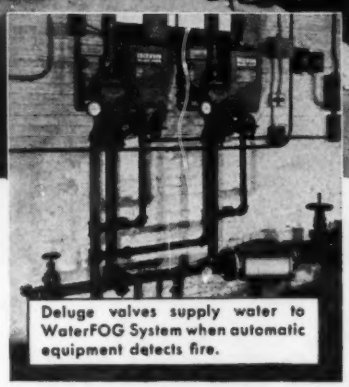
Post war "professional" fire fighters in Britain are expected to demand conditions of labor equal to those enjoyed by workers outside the fire service. The FBU is already "on the warpath" for an eight hour day, and three platoons.

Tired, but triumphant, a London firefighter was riding in a "red appliance"—a London tramcar—for a change in his few hours of liberty. He offered his fare to the conductress who, smiling, said "I'm not taking money from you, or any other fireman. If the Transport Board was really up to snuff it would let all of you ride free, after all you have

THIS OIL CAUGHT FIRE . . .



Arrows show two of several WaterFOG heads on quench tank. Blow-off caps keep heads clean.



Deluge valves supply water to WaterFOG System when automatic equipment detects fire.

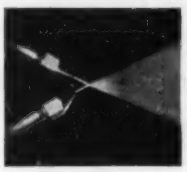
ROCKWOOD WaterFOG *Put it Out!*

4,000 gallons of oil in a quench tank . . . shell casings passing through, hot from the hardening furnace . . . and a WaterFOG System protecting against fire.

Suddenly a burst of flame . . . the entire surface ablaze! Just as suddenly . . . an all-enveloping cloud of fog . . . snuffing the fire, cooling the liquid. In no time at all, production resumed — no damage, only the merest delay, thanks to WaterFOG.

Such is the experience of a shell plant in Chicago . . . another in South Bend . . . another in Worcester . . . where oil quench tanks are WaterFOG-protected. And other flammable liquid hazards are similarly protected — transformers, paint shops, dryers, oil storage, etc.

WaterFOG, being *water*, is cheap, plentiful. Being *fog*, it is effective on flammable liquid fires where spray and solid stream are unsafe. It works faster, cools a wider area, doesn't splash. Both Underwriters' Laboratories and Associated Factory Mutuals approve Rockwood WaterFOG installations; the Navy, Coast Guard, Maritime Commission and Army, and hundreds of plants use WaterFOG — fixed piping and hose nozzles. Write for Bulletin 123.



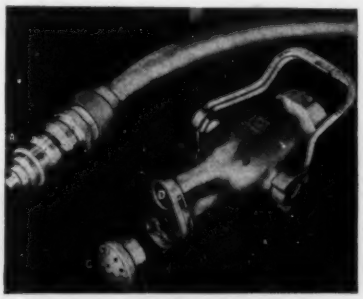
WaterFOG is— Water, broken into tiny foglets much finer than spray, by impinging streams from Rockwood nozzles. Floating over the combustion area, they absorb heat faster than spray or solid stream . . . cooling the fire, retarding vaporization . . . and changing into steam, shut off oxygen.

ROCKWOOD SPRINKLER COMPANY
54 Harlow St., Worcester 5, Mass.
Specialists in Fire Protection Engineering, Equipment and Installation since 1907

ROCKWOOD WaterFOG

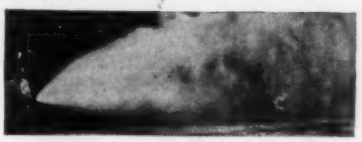
Water Engineered by Rockwood Cools, Confines, Smothers Oil Fires

FOG for Cooling, Confining, Extinguishing or SOLID STREAM for Deep-Seated Fires



Rockwood's SG-40 Nozzle Projects Either—by a Quick Movement of the Handle!

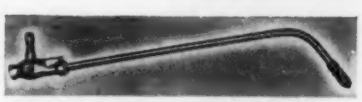
SG-40 Nozzle, and extension applicator for attachment to regular fire hose line. 1", 1½" and 2½" sizes.



Discharging high-velocity WaterFOG with considerable forward projection.

Moving the handle causes a solid stream to be discharged.

And for Fighting Fires Close Up—
FOG Tip being removed . . .
. . . replaced by applicator.



With extension applicator attached, SG-40 projects low-velocity WaterFOG in ball-shaped pattern. 4' and 10' applicators fit 1½" nozzle; 12' applicator fits 2½" nozzle.

Write for Bulletin 123, giving more complete information on WaterFOG equipment.

EXECUTIVES! A colored movie (16 mm.) showing tests of Rockwood WaterFOG, is available.

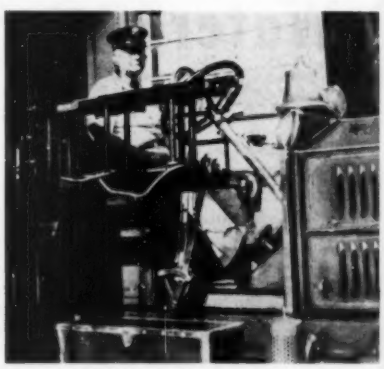
done, just as they do on municipal buses and trams in the provinces." Seems the woman had been bombed out, and the firemen had saved much of her belongings, and aided her in many ways—then refused to accept money she had offered them. This was her way of getting back at them, by insisting on paying the fireman's fare.—"Fire," October, 1944.

In London, "while any member of the Fire Service can enter any premises in which he has reason to suspect the presence of fire, yet in no case is he empowered to enter premises to prevent the outbreak of fire.—"Fire," October, 1944.

In its 50 years existence, the first Johannesburg fireman to be killed at a fire was Fireman T. Jamison, who was caught by the collapse of a wall.

Veteran Driver of Hampton Fire Department

Norwood Jones, chief engineer of the Hampton, Va., fire department knows where he's going when he rolls out with No. 1 pumper on alarms for he has been driving fire apparatus in the city the past forty years.



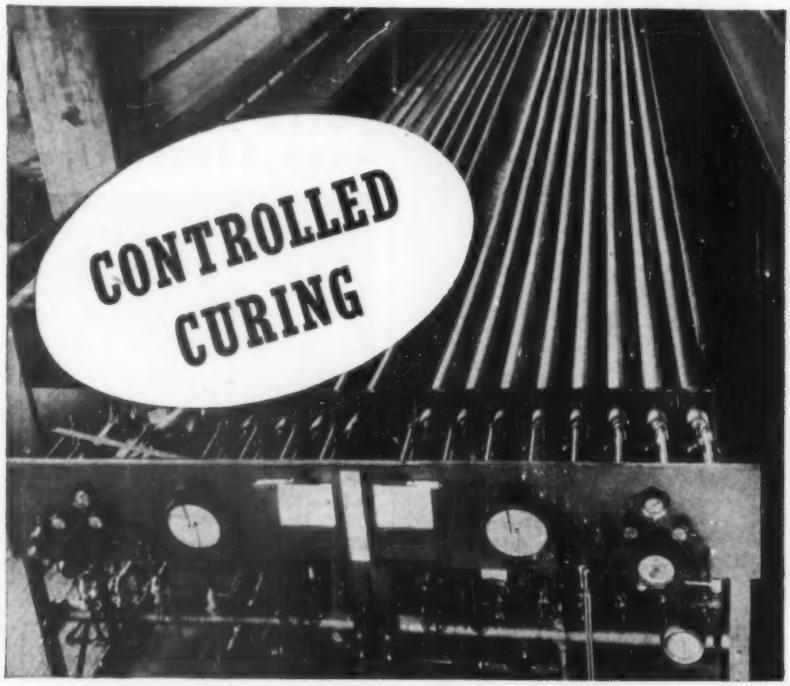
Norwood Jones

Entering the city's fire department as a paid driver on Oct. 1, 1900, Jones has since made his home in rooms above the fire station and has witnessed many changes in the department's equipment and fire fighting methods. On hand for all the major fires in Tidewater Virginia during those years, the veteran has a wealth or interesting fire tales.

The department's equipment when Jones became engineer back in 1900 consisted of a No. 200, 600 gallon American LaFrance steamer, a one-horse hosereel carrying 1,200 feet and a hand drawn hook and ladder truck.

Jones remodeled the hook and ladder for horses and at one time five horses were stabled in the station. The hose reel was replaced in 1908 by a hose and chemical wagon. First piece of motorized equipment, Jones recalls, was an American LaFrance hose and chemical truck delivered on Jan. 1, 1914 and still in use as a reserve piece. The apparatus was also utilized to tow the steamer and the white haired smoke eater has many fond memories of trips over rough country roads with the steamer bouncing along behind.

A few years later he rebuilt the hook



for "Control in Action"

Both the lining and the jacket of a fire hose are important factors in insuring reliable performance under the most extreme tests of service.

As the result of controlled curing and balanced weaving, excessive writhing, twisting and elongation of Eureka Fire Hose are prevented.

These refinements in vulcanization and weaving, together with step-by-step testing of the product during manufacture, are three of the many reasons for the long life, efficiency and dependability of Eureka Fire Hose.

"For greater protection to life and property"

EUREKA FIRE HOSE

Division of United States Rubber Company

1230 Sixth Avenue • Rockefeller Center • New York 20, New York

EUREKA

AKRON WATER THIEF

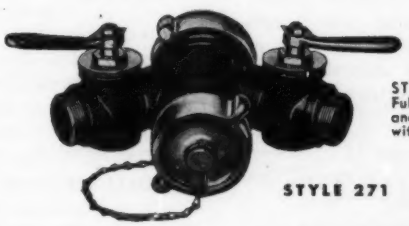
STYLE 273

STYLE 273—Two 1½" Akron Full Flow "Ball Type" Valves and one 2½" Akron Full Flow "Ball Type" Valve so that each valve may be operated independent of the others.

WITH FULL FLOW VALVES

With the Akron Water Thief attached to apparatus or hydrant you can switch from large to small hose lines, or from small to large, without loss of time in removing either hose line. Simply turn valves as desired. For instance, if 2½" hose line is no longer necessary to handle fire, then two small hose lines may be used. Or with two small hose lines in use, a larger stream may be placed in service. This valuable aid in effective fire fighting is offered in different types shown here. Write to us for full details.

AKRON BRASS MFG. COMPANY, INC.
WOOSTER, OHIO



STYLE 271

STYLE 271—Two 1½" Akron Full Flow "Ball Type" Valves and 2½" open end provided with cap and chain.

STYLE 270

STYLE 270—Akron Granger Water Thief. One end threaded 2½" female thread, other end 2½" male thread, so fitting may be placed in hose line or on hydrant and 1, 2 or 3 hose lines taken from same. All small outlets capped as shown.

AKRON BRASS
FIRE FIGHTING EQUIPMENT

GOODALL FIRE HOSE

Every length built to assure *extra* resistance to excessive pressures, punctures and other service hazards. Backed by a reputation that has won the confidence of firefighters everywhere.

COTTON RUBBER LINED

Single or Double Jacket. With or without Underwriters' Label.

CHEMICAL ENGINE OR BOOSTER

"76" Brand — wrapped construction. "Stonewall" Brand—moulded-and-braided construction.

FIRE ENGINE SUCTION HOSE

Style S-45—Smooth bore, for fast suction. Highly resistant to crushing.

UNDERWRITERS' UNLINED LINEN

"Atlantic" Brand—Yellow label. Best quality long line flax. "Pacific" Brand—Green Label. 100% pure tow flax.

GOODALL BOOTS & COATS

The *quality* built into GOODALL boots and coats is evident not only in their rugged workmanship and durability, but in their easy-wear styling, as well. And comfort *is* important, especially when the men must remain "in the fight" for many hours.

GOODALL FIREMEN'S BOOTS

Husky, long-wearing boots especially designed for this service. Strong wood "Ladder Shanks" reinforce the arches to prevent strain and fatigue on long ladder "stands". Thick, wide guards at shank, for protection against punctures. Black slip-proof soles. Inside and outside gum knee patch.

GOODALL "S.S.S." FIRE COAT

The firemen's favorite. Dull finish black rubber. Lightweight, comfortable. Corduroy band collar, square shoulders, strap-and-buckle on sleeves. Length, 46". Sizes, 34 to 46.

BUY MORE BONDS . . . FOR THE 6TH WAR LOAN!

GOODALL RUBBER CO. INC.

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THE GOODALL-WHITEHEAD COMPANIES
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Factory—Trenton, N. J. (Est. 1870) 74 Years of "Know How"—Our Most Valuable Commodity

and ladder truck, making a tractor trailer of it with an early model Ford furnishing the power. The city purchased its first pumper, an 850 gallon Ahrens Fox, in 1922 and this truck is still in service. Other equipment of the department includes a 500 gallon Seagrave pumper, purchased in 1928, and an Ahrens Fox combination hook and ladder and combination pumper.

Jones' enthusiasm for his job has not diminished with the passing years and the fire equipment is a splendid example of the infinite care he has taken.

A member of the Virginia State Volunteer Firemen's association, he once rejected an offer to become chief of the Hampton volunteers, believing his duties as a driver would prevent him from properly filling the post.

Hampton's population, normally around 6,000, has grown rapidly during the war years with a number of vital industries springing up nearby. Its volunteer fire department, headed by Chief W. S. Renn, has 74 members with 20 now serving in the armed forces. One member was killed in a plane accident in Texas.

SANFORD D. DEWEY.

They Fight—The Flames

An ammunition truck strains and splutters along a lane in Northern France. So far it is safe. Shells have missed it, spent bullets have apparently found no entry into the closely-stacked cases.

The driver—tautly conscious of all those eggs in one basket—noses gently round the road-bend, alongside the wood and past the dump; and it's there, by one of the infernal freaks of war, that things happen. Smoke; then flames, which, fanning across the driver's seat, send him leaping for the ditch. The "ammo's" on fire.

And the dump is a gasoline dump, a truck-length from the truck.

A fire like this is no job for soldiers—that is, ordinary soldiers. Someone rings a fire-bell. At present there's less fire than smoke. Men edge away. If the stuff doesn't explode. . . .

Over the hummocky field opposite, bobbing like a boat, comes the fire engine. Eight trained men, obviously drilled to a split-second schedule, fix up pumps and hose behind cover of a low bank just as, with a mighty *woof*, the truck and everything in it are lifted skywards.

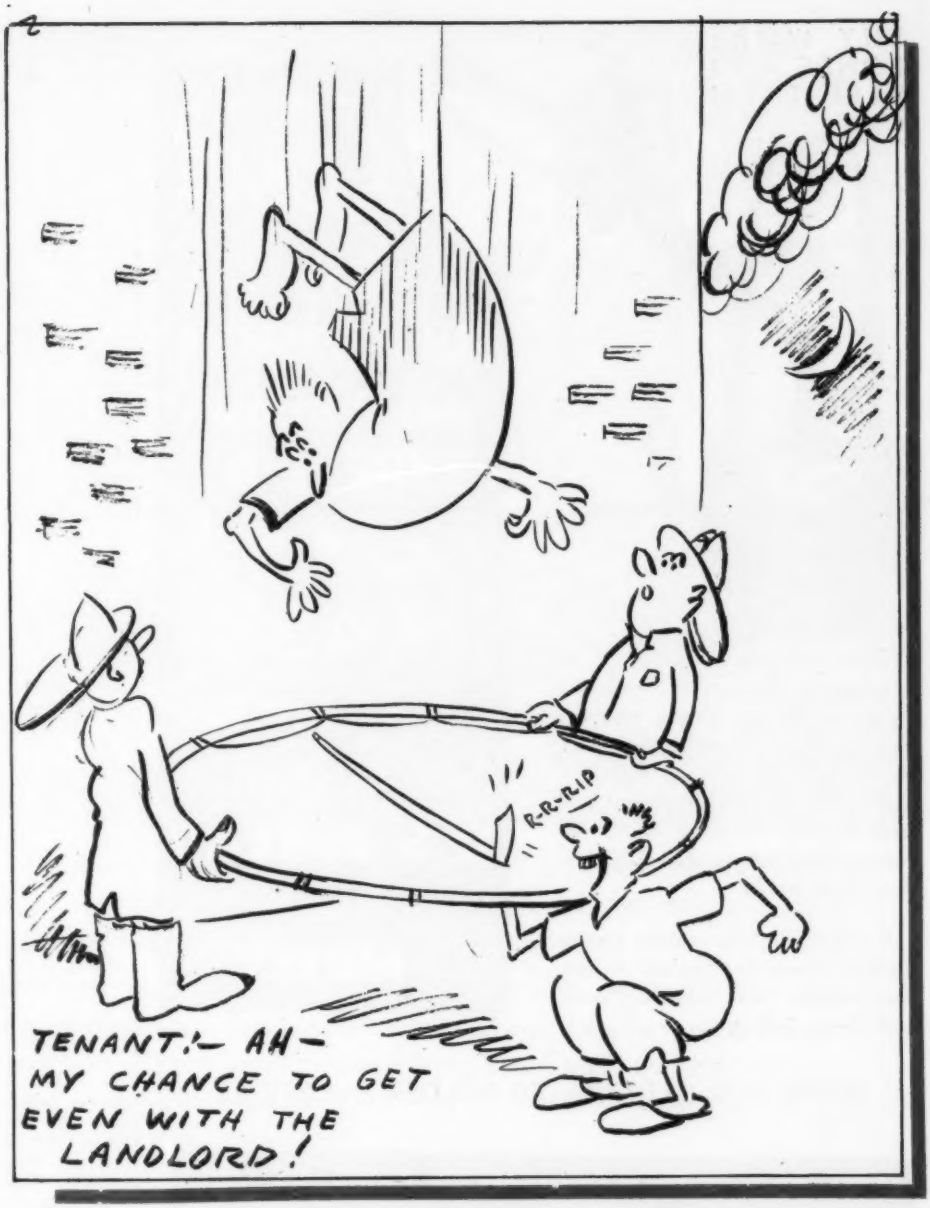
The rest is routine. How to save a threatened gasoline dump is part of the training of Britain's Army Fire Service.

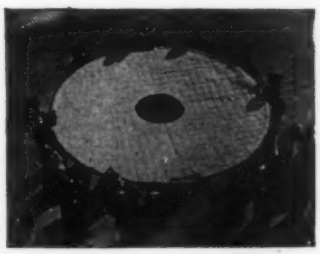
Everything was got under control in 50 minutes. For this was a real incident, and the facts were given me by Brigadier C. G. C. Wade, Director of those Services.

"It certainly was one of our more exciting shows," was the quiet comment of the man who now controls or advises thousands of Army fire fighters in all theatres of war, from France to Burma.

Before the war the Service numbered exactly fifteen men—soldiers trained as firemen. Today specialist fire-fighters are still soldiers. Armed with rifles and automatic weapons, they can leave their fire pumps to deal with interfering snipers. And they are not only soldiers and fire-fighters, but hot-gospellers; they

WOULD YOU LIKE A COPY OF THIS CARTOON FOR YOUR BULLETIN BOARD OR A BUDDY? JUST DROP US A CARD.





IT'S a laugh, of course—but don't forget for a moment that rescue work is serious business. PLAY SAFE—be sure your net is in good condition. If there is any doubt, let us check it over for you (no obligation).

ATLAS NETS are the strongest, safest, most modern nets ever offered the fire service. PLAY SAFE—buy ATLAS.

Specify ATLAS on new apparatus

ATLAS SAFETY EQUIPMENT CO., Inc.

26 WARREN STREET ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ NEW YORK 7, N. Y.

Kindly mention FIRE ENGINEERING *when writing advertisers*

BUY MORE BONDS AND KEEP THEM

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ACME
The
FULL VISION
All-Purpose
TYPE "F D"
GAS
MASK
IS APPROVED
By the
U. S. BUREAU
of
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Wherever Acme Gas Masks are used, you'll find persons who are convinced that Non-Distorted FULL VISION is an essential factor for Safety. This exclusive feature is possible because of extra wide, flat Safety Glass Lenses used ONLY in Acme Gas Masks.

The Acme Canister protects against Carbon Monoxide, Organic Vapors, Acid Gases, Toxic Smokes, Fumes, and Smoke Suffocation.

WRITE FOR ILLUSTRATED FOLDER and PRICES

ACME PROTECTION EQUIPMENT COMPANY, INC.
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AMERICAN MACHINE & DIE COMPANY, INC.
Fire Alarm "American" Airport Sirens
THE ORIGINAL VERTICAL TYPE
22 YEARS NATIONWIDE TESTED SERVICE
830 Minnesota Bldg. St. Paul, Minn.

For "Dependability" — *the American (formerly Erick)* was the choice of hundreds of safety fire chiefs from coast to coast. There was a reason. Write us for details. Sirens Reserviced.

Some Sales Territories Available.

persuade the rest of the army to become, as the Brigadier put it, "fire conscious." With them, preventing fires ranks higher than putting them out.

Before these boys went in with the landing troops on the Normandy beaches, or stood offshore in their fireboats, their career had been a pretty chequered one. Their slick methods of dealing with the fire threat from enemy shelling as landing craft ran in the stores and equipment, came only from long and sometimes discouraging experience, starting at the end of the "phony war" in 1940. Before then, the nucleus of them had been more or less bottled up at Cherbourg, Brest and Nantes—three brigades in all—trained in the "spit-and-polishh" tradition, equipped with bright red fire-engines of the very latest civilian pattern, but with nothing to do beyond scotching an occasional store-fire. They taught fire-prevention: fought dummy conflagrations.

Then came the great debacle. Fighting gallantly, these early units covered the evacuation of their depots, then sadly wrecked the bright red fire engines and headed or home.

With the firemen back in England, the authorities decided that fire-fighting for war must be brought up to date, with enough men to strangle the fire threat everywhere, and appliances able to stand up to modern blitz tactics.

They drafted in civilian experts; started a training centre. First job tackled by the new trainees was Iceland, where, in winter, if the hydrants are not frozen up completely already, the jets from the pumps often freeze before reaching the fire. Other units went to Egypt, Iraq and India, Gibraltar and Madagascar.

In Invasion of Africa

Then came the landings in North Africa, Sicily and Italy, and the Fire Service which covered them was ten times the size of the one sent to France in 1939 and each brigade had five times the fire-fighting power.

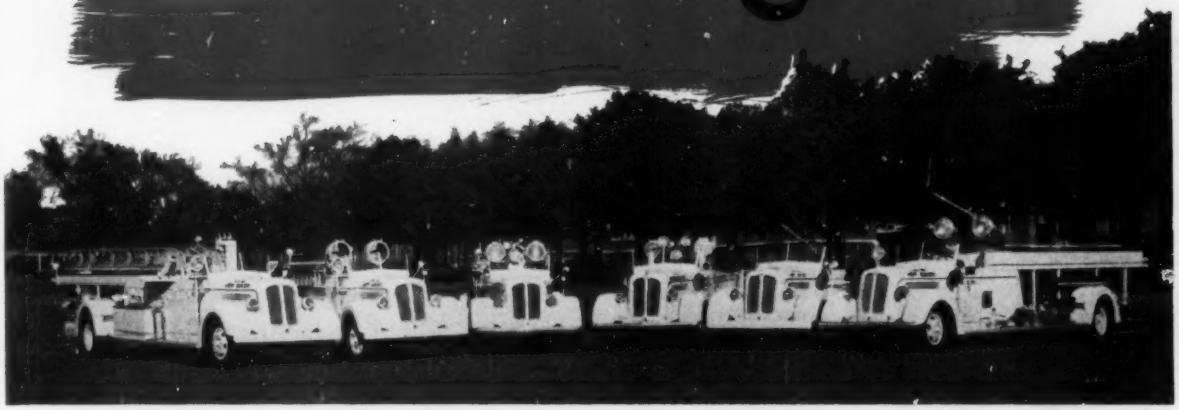
In Algiers they suffered their first heavy casualties. A ship on fire in the docks blew up soon after the fire brigade had gone aboard; only one of the team was picked up alive.

Experience had grown during the long victory trek from Alamein, through Tripoli to Tunis, Syracuse, Catania and Naples. Always, outside the port areas, the problem was the same: no water for fire-fighting. Improvisation became a fine art. Shell holes and the cellars of blitzed buildings were lined with concrete or tarpaulins to make water tanks; every captured vehicle that could possibly carry water was pressed into service.

Today's equipment counters all the snags met within these earlier fire-battles. Each Army fire section of eight men runs its own tender, with four-wheel drive and high clearance for covering rough ground. The trailer pump can deliver 500 gallons a minute. Built into it is a 200-gallon tank feeding a 20-gallon-a-minute pump which starts up at once while the big pump is being connected to the main supply.

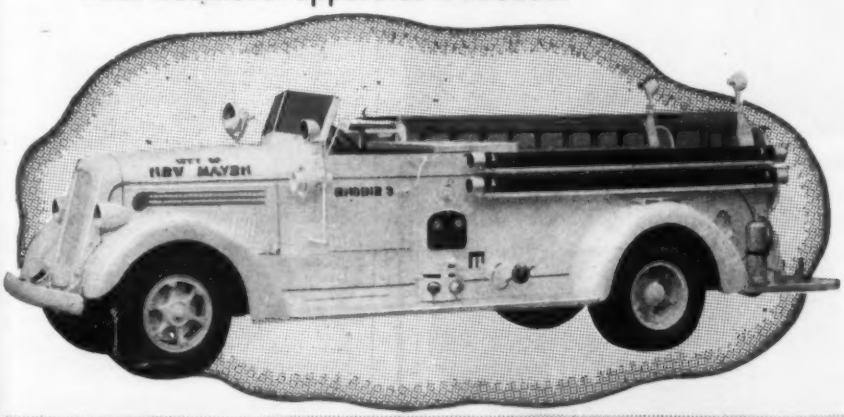
Foam equipment for gasoline and oil fires, breathing gear for use in ships' holds and other confined spaces, and a 1,500-gallon self-erecting canvas water tank are a few of the luxury items, be-

In New Haven It's Seagrave



New Haven, an outstanding city of Connecticut and the home of the famous Yale University, protected from the hazards of fire by the delivery of six additional pieces of Seagrave Apparatus (pictured above).

In metropolitan areas, in cities and villages from coast to coast it is the same story . . . a story of Seagrave dependability throughout the years . . . a story of trouble-free service. . . . That's why more and more Fire Chiefs specify Seagrave when additional apparatus is needed.



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THE SEAGRAVE CORPORATION

COLUMBUS, OHIO

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Bickle-Seagrave, Ltd.
Woodstock, Ont.

THE GREATEST NAME IN FIRE APPARATUS

E-X-P-A-N-D
with
BUCKEYE
HERE is the Expander we would like to demonstrate to you at the Convention if you are not already familiar with it.
Typically Buckeye in design, this Expander does more work, since only one is required for various sizes of hose. Only a simple change of segment assembly is necessary for different hose sizes.
Ask about these and other important design details when we see you at the Convention.
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FIRE DEPARTMENT ACCESSORIES
BUCKEYE IRON AND BRASS WORKS
DAYTON 2, OHIO

SIRENO
PRECISION MADE ELECTRIC SIRENS
THE UTMOST IN DEPENDABILITY AND LONG LIFE
THE SIRENO CO., Inc.
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NEW YORK CITY
SIRENO WITH 7" RED FLASHING LIGHT

sides a 30-ft. by 30-ft. tarpaulin which can hold 10,000 gallons of water in an emergency.

The Service also uses fire-boats—floating fire stations, with the crews living on board. Since the landings in France they have coped with every sort of ship fire from landing craft to gasoline tankers, without help from the shore. One landing craft sinking from enemy fire was full of wounded. A fire-boat put a pump on board and kept the craft afloat till the last man was off.

On land the Army Fire Services function like municipal brigades at home, but with more improvisation. One fire station in Normandy was improvised out of a disused railway station; in many places the Army men have moved into the town fire-station after the retreating enemy has taken all the original equipment.

Nothing comes amiss to these boys. Most frequent fires are in gasoline dumps shelled by the enemy—who would bomb them, too, if he had the air power. Burning tanks have been saved in time for local repairs to make them battle-worthy again.

But the most gratifying work is on the human side. Many soldiers and civilians live today because the Army Fire Service tackled fires in hospitals and other buildings in liberated France almost before the enemy had cleared out.

E. CHISHOLM THOMSON
British Writer and Military Specialist

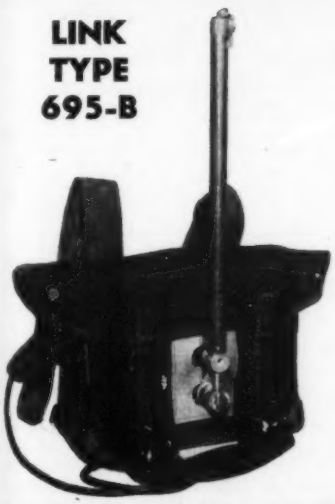
What's Burning

THE following list includes fires of $50,000 loss and over in the United States and Canada, for the month of November, 1944. These figures, compiled from the telegraphic reports, are based on estimates made at the time and are subject to later investigation and consequent revision. Taken as a whole, however, they are an approximately correct view of the losses incurred. The figures represent losses in thousands of dollars.

Month Ending November 30	Losses in Thousands of Dollars
Winterport, Me.—Main bldg. and boiler house of potato dehydrating plant of Maine Food Processor Co. destroyed	80
Lincoln, Neb.—Archie Furr Wholesale Grocery Co. destroyed	170
Cold Springs, N. Y.—Dwelling, known as "Old Campbell Homestead" destroyed	50
Oneida, Tenn.—Grammar school bldg. and auditorium destroyed	50
Pasco, Wash.—Nelson's Market refrigeration plant destroyed	50
Cupertino, Cal.—Mill and warehouse of R. Cali & Bros. destroyed	80
Elberton, Ga.—Elks bldg. damaged	50
Fallston, N. C.—Bldg. occupied by W. J. Dixon Dry Goods & Grocery store, Fallston Drug Co. and Gettys Parker beauty shop destroyed	65
Madras, Ore.—Horse-heaven mines damaged	60
Tooele, Utah—Wooden warehouse of Tooele Ordnance Depot destroyed	80
Riverside, Cal.—Victoria Country Club clubhouse destroyed	50
San Jose, Cal.—Slaughter house of Gambord Meat Co. destroyed	80
Greenville, Tex.—The Collins Block, including McVay Cafe, Murray Clothing Co., Collins Bros. Furniture Co., Ettelman Jewelry, Thompson Meat Market and Shofner Grocery destroyed	170
Windsor, Newfoundland—Business section damaged	125
Belfast, Me.—Main bldg. and boiler house of Sherman & Co. leatherboard plant destroyed	50

FIRE FIGHTERS *Prefer* LINK RADIO

LINK TYPE 695-B



This New York City Fire Boat with Lt. E. Schill in command operates with the greatest effectiveness by reason of its instantaneous two-way radio communication with the Chief of the Marine Division employing the Link Type 695-B pack set.

It is not mere coincidence that Link Emergency Radio Communication Equipment is preferred by Fire Departments everywhere. Link was the first major manufacturer of Armstrong licensed FM equipment commercially acceptable for police, fire, forestry, railway, public utility, government and other emergency services. Link equipment excels in Design, Engineering and Performance.

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Quicker, Safer Way to Put Out Fires

The Universal Nozzle provides the *quicker* way to put out fires because the hoseman can change the type of stream in an instant for any sudden change in fire conditions. The Universal Nozzle provides the *safer* way to put out fires because it can put a 130 degree water curtain between the hoseman and the flames . . . also in an instant . . . while retaining a solid stream, if desired. The Universal is the versatile nozzle, proved by seven years of actual use under all conceivable conditions.

Solid Stream • Fog • Water Curtain

or Any Combination

with

The **UNIVERSAL NOZZLE**

Satisfied Users Include

The U. S. Army and Navy at their air stations, the U. S. Coast Guard on its vessels, in addition to industries and municipal fire departments everywhere.

Write for Details

Inquiries about this remarkable nozzle are invited. Dealers, industries, and fire departments will be sent full details without any obligation.

L. N. CURTIS & SONS

Emergency Equipment

451 Hudson St.

OAKLAND 9, CALIF.

Portland, Ore.—Columbia Food Warehouses destroyed 50

Lander, Wyo.—Kerlyn Oil Co.'s drill operation on Sheldon Dome, 40 miles north, damaged 80

New Westminster, B. C.—St. Ann's Academy damaged 80

Thomaston, Ga.—Grammar school bldg. destroyed 75

Waterville, Me. — Bldg., business section, destroyed 125

Ypsilanti, Mich.—Federal Dept. Store, Willow Run Federal Housing Project, four miles east, destroyed..... 450

Diswell, Va. — Car of Railway Express Agency, approx. 1,500 shipments destroyed 50

Montmorency, Que.—Quebec Railway Elevator, Montmorency Falls, destroyed..... 50

Ramor, Ont. — Ramor Hotel and general store of J. N. Cloutier, damaged..... 50

Boone, N. C.—Belk White Dept. Store, damaged 80

Fayetteville, N. C. — Seabrook Road USO Club, housed in unit of YMCA destroyed. 60

Newport, R. I.—Lumber mill, Waite's wharf, plant of Glen Bros., Inc., and blacksmith shop and machine company, destroyed 50

Memphis, Tenn.—Main warehouse of Memphis Cotton Oil Mill, destroyed..... 50

Mt. Vernon, Ill.—Masonic bldg. destroyed. 50

Hagerstown, Md. — Hagerstown laundry damaged 50

St. Paul, Minn.—Agricultural bldg. at State Fair grounds destroyed..... 50

Philadelphia, Pa.—Radbill Oil Co. destroyed 80

Rockwall, Tex.—M. B. Shook cotton warehouse and 1,000 bales cotton destroyed... 100

Winnipeg, Man.—St. Matthew's Anglican Church destroyed 60

Waukegan, Ill.—Sample Furniture Co. and West Tire and Auto Supply Store damaged 80

Painsville, Ohio—Main bldg. of Storrs & Harrison Nursery, one mile east damaged 60

Pouce Coupe, B. C.—Midwand & Pacific Grain Co. elevator destroyed..... 170

Halifax, N. S.—Canadian Legion Hotel destroyed 80

Toronto, Ont.—Rumley Bldg., warehouse factory occupied by Loblaw Groceterias, Plate and Structural Steel Products, Mafelco, Ltd., and Popular Cloak Co., damaged 80

South Boston, Va.—Virginia-Carolina warehouse, covering approximately a city block destroyed; 140,000 pounds of leaves destroyed 80

Blakely, Ga. — Peanut storage warehouse and shelling plant of Farmers' Gin & Warehouse Co. destroyed..... 550

Emmitsburg, Md.—Bldg., housing kitchen, Mount St. Mary's College destroyed; another bldg. damaged..... 80

St. Louis, Mo.—Carver bowling alleys and cocktail lounge damaged..... 55

Chattanooga, Tenn.—Bldg. of Red Bank High School, housing ten classrooms and a cafeteria, destroyed..... 50

Salem, Ore.—Producers Co-operative Packing Co. destroyed..... 80

San Francisco, Cal.—Morck Brush Co. damaged 250

East St. Louis, Ill.—Warehouse of Anheuser-Busch, Inc., damaged..... 55

Waukesha, Wis.—Garage of Pet Milk Co. plant, North Prairie, destroyed..... 80

Charleston, S. C.—Shipyard river terminals, occupied by James Doran Stevedoring Co., and machine shop owned by Etiwan Fertilizer Co., and others; also eight freight cars destroyed..... 450

Correction

The October issue of FIRE ENGINEERING under the heading "What's Burning" carried an item on a $70,000 fire in the Superior Olive Products Plant and stated that the plant was located in Fresno, Cal. Chief L. A. Moore of the Fresno Fire Department tells us that the plant is located about seven miles outside of the city limits and that the fire was fought by the County Forest Patrol.

An item also appeared in the same column describing the fire at Casner's Drug Store in Fresno. The fire loss was given as $50,000. Chief Moore advises us that the loss has since been reduced to approximately $32,000, by the insurance adjusters.

SPECIAL BINDERS AGAIN AVAILABLE

Every issue of FIRE ENGINEERING has something you may want for future reference. With one of these standard handy binders, you will have every article at your fingertips and a complete index of everything published during the year. The binder holds 24 issues and two yearly indexes.

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FRONT and WAYNE? or FRONT and MAIN?

RCA 2-Way Radio Could Save Firemen Many a "Wild-Goose Chase"!

AM or FM
RCA Makes Both

If so many people wouldn't behave crazily when a fire starts, life would be easier for firemen.

Home-owners telephoning to report a fire often are so excited they can't talk intelligibly . . . may give wrong address . . . and off goes fire apparatus in the wrong direction.

By the time the correct address is known the fire apparatus is out of reach.

That is, unless you have *radio*.

With a well-planned RCA 2-Way Radio system you can communicate instantly with every station, every mobile unit.

Resolve now that radio will be a *must* in your postwar program. RCA 2-Way Radio will make it far easier for you and your department to do a better, bigger job.

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25 Years of Progress
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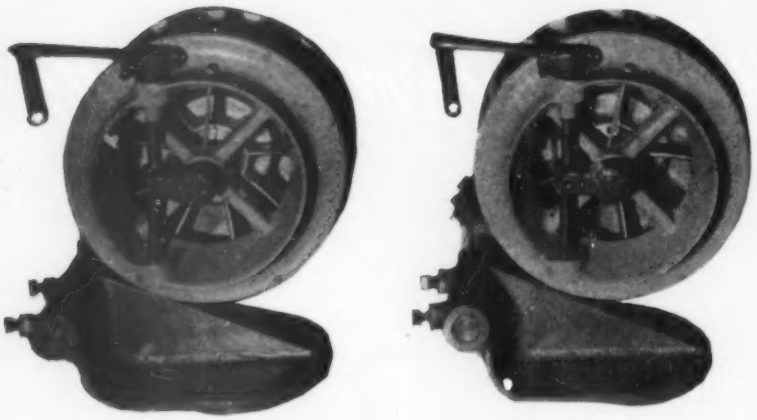

H.O.R. Mechanical Sirens
REG. U.S. PAT. OFFICE

YET UNEQUALED
MOST POWERFUL SIREN
FOR FIRE APPARATUS
AND CHIEFS' CARS

SOME IN SERVICE FOR OVER 10 YEARS. MANY OF THEM WITH OVER 150,000 MILES ACTUAL SERVICE WITHOUT REQUIRING ANY REPAIRS.

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H. O. R. Co., Inc. 6-10 BROAD ST. STATEN ISLAND 4, N. Y.

BOOKS For the Modern Fire Fighter . . .

Recognized by the Fire Service as Standard

Questions and Answers for Lieutenant and Captain—$2.50
Promotional Study Course for Firemen—$3.00
Fire Chief's Handbook—$4.00
Fire Service Hydraulics—$3.00

(The Above Prices Are All Postpaid)

CASE-SHEPPERD-MANN PUBLISHING CORP.
24 West 40th Street, New York 18, N. Y.

PERSONS IN THE NEWS

Fire Chief Fred A. Baumgarten in December completed 40 years of service in the Lake Charles (La.) Fire Department, 30 years of which, as chief.

Chief Edward H. Siller, Yonkers Fire Department, who has rounded out 34 years as a member of the Department, and who was severely burned in a fire January 1942 in which two firemen were killed, on the occasion of his anniversary entered Post-Graduate Hospital, Manhattan (N.Y.C.) to undergo plastic surgery for burns. He is Treasurer of the Fire Chiefs' Emergency Plan of Westchester County.

A testimonial dinner was held in September for Michael F. Conley, who recently retired from the New York Fire Department.

On November 1, Assistant Fire Chief Michael F. Conway retired from the New York Fire Department after 36 years of service. He had been in command of the division of combustibles and fire prevention and was a medal winner.

Deputy Chief Alexander J. Sutherland of the Rochester (N. Y.) Fire Bureau, retired December 3 at the age of 70. He was made a fireman April 17, 1905, lieutenant, February 1, 1910, captain October 16, 1912 and on March 1, 1923 was appointed instructor at the Genesee Street Training School with rank of Battalion Chief. On July 1, 1931 he became a Deputy Chief. He served in the Spanish War, and in the Philippines. He is a gifted speaker and widely popular in the fire service. (Thanks T. McC.)

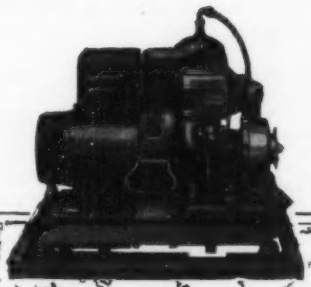
Deaths

Bernard F. Lynch, chief of fire prevention, Indianapolis Fire Department died early in September, of a heart attack a day after he was busy tracing down a case of suspected arson. He was 54 years old. He entered the department in 1912; was made captain in 1922 and in April, 1931 named second assistant chief in charge of fire prevention, his title later being changed to chief. He was a familiar figure at public gatherings, a member of the International Association of Fire Chiefs, Indiana Fire Chief Association and the National Fire Protection Association. He leaves a wife, two sons and a daughter.

William T. McCarthy, veteran, retired deputy chief, Elmira Fire Department died in Elmira after a year's illness. At one time he was drillmaster of the department.

Alexander E. Volin, 58, former deputy chief, Pittsfield (Mass.) Fire Department, died after a long illness. He was a member of the Department for 35 years, at one time serving on the Board of Directors of the Massachusetts' State Firemen's Association.

Clinton G. Roberts, first fire chief of the Lindsay (Calif.) Fire Department



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that will do you a Lot of Good

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From Port Chester, New York, to Chungking, China . . . with plenty of stops in between.

Just one trip of many . . . made by a Homelite service man . . . to get facts . . . to find out how Homelite Portable Generators are performing and standing up under the tough conditions of war.

On trips like these . . . to Alaska, Africa, India and all the theatres of war, Homelite men get the "dope" first hand. And they transmit their information back to our engineering department where new advancements in design and performance are constantly being made to meet the pace.

Yes, trips like these will do you a lot of good. For they have piled up a wealth of priceless experience that will enable us to give you better generators, better pumps and better blowers, than you ever had before.

THE BENEFITS FOR YOU

Better cold weather operation . . . better hot weather operation . . . new cooling methods . . . advanced type bearings . . . less trouble and maintenance . . . much longer wear . . . more power . . . more portability . . . these and many other features will be but standard advantages of the New Homelite Gasoline-engine-driven Generators, Pumps and Blowers that you will get and use, after the war is over.

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PORT CHESTER, NEW YORK

PORTABLE PUMPS • GENERATORS • BLOWERS

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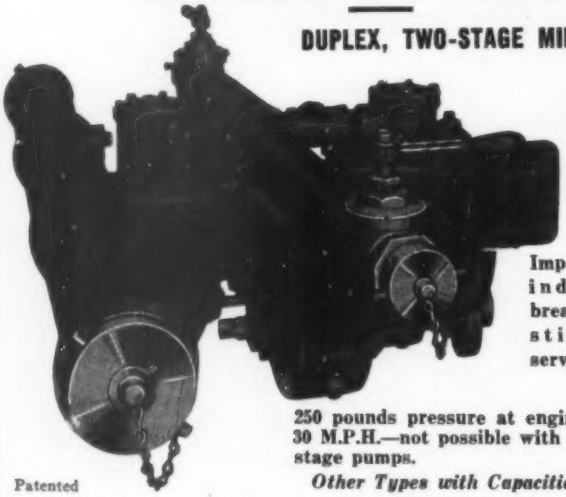
CENTRIFUGAL PUMPS

DUPLEX, TWO-STAGE MIDSHIP MOUNTED



High Pressure performance entirely unaffected when unit used to pump gritty water.

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Impellers mounted on individual shafts—breakdown of one pump still leaves one for service.

•

250 pounds pressure at engine speed equal to 30 M.P.H.—not possible with conventional two-stage pumps.

Patented

Other Types with Capacities to 750 G.P.M.

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WRITE FOR BULLETIN 8731F

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AMERICAN-MARSH PUMPS, INC., Battle Creek, Michigan

Pumps — and pumps only — since 1873

"HAHN" FIRE APPARATUS

SINCE 1907

FINEST IN THE WORLD ★ STREAMLINED ★ BALANCED CHASSIS ★ AMPLY POWERED ★ VERY EFFICIENT PUMPS WITH PLENTY IN RESERVE

HAHN MOTORS, Inc.

HAMBURG, PA.

when it was organized in 1910, died at La Junta, (Colo.)

Former Chief Weaver, Nashville (Tenn.) died October 30. He was a former member of the International Association of Fire Chiefs and active in fire service circles.

Ex-Chief Phil Wright of San Antonio (Texas) died following an illness which had kept him confined to his home for a long time. He was formerly Chief of the San Antonio Fire Department and was fire and police commissioner of that city for 16 years. Prior to World War One he was a director in the International Association of Fire Engineers. (Thanks Dick Joyner.)

Thomas W. Hurley, 67, for nearly half a century in the Northampton (Mass.) Fire Department, for the past five years as Chief, died suddenly November 6th. He was a past president and past secretary of the Northampton Firemen's Relief Association and was also active in the state organization of the municipal fire chiefs.

Appointments and Promotions

To Chief, Albany (Calif.) Fire Department, Capt. Fred Pimental, following the death of Chief John T. Riley.

Clyde L. Peterson to Assistant Chief, Ogden (Utah) Fire Department.

Edgar Stone to Chief Atkins (Ark.) Fire Department; Dewey Abernathy, Assistant Chief.

Milton Myers, age 92, oldest volunteer fireman in Harrisburg (Pa.) was elected president of Mt. Vernon Hook & Ladder Company, that city.

George A. Smith, named Chief, Berea (O.) Fire Department. He is a former Cleveland fireman and replaces Chief John Nevil, who retired last March.

Fire Chief Edward P. Welch and Assistant Chief Clarence W. Ogborn elected to executive positions in the Ohio Fire Chief's Association. Merle W. Gifford, Chief, Boardman (O.) Fire Department was elected president.

Frank L. Taylor, Owensboro (Ky.) was elected president of the Kentucky Firemen's Association at its 25th annual convention in Paris (Ky.).

Carl H. Fuchs, Des Moines, was elected president of the Iowa Firemen's Association, at its September conference.

Harry Gernard, Fogelsville (Pa.) was elected president of the Lehigh County Volunteer Firemen's Association.

A. H. Fasolas, Turtle Creek Fire Department, has been elected Vice President, Firemen's Association of the State of Pennsylvania.

Fire Chief William Meinheit, Berkeley (Cal.) has been appointed a member of the Fire Advisory Committee of California State War Council by Governor Warren.

"Mulberry" — the Secret Floating Harbor for Normandy Landings. Large concrete or steel pontoons were installed at regular intervals, transverse to the pontoon bridgeway to strengthen it and to serve as mooring places for vessels. Omaha beach can be seen in the background.

Official U. S. Navy Photograph

Made Invasion Landings Possible and Saved Ships from "Fires at Sea"

The U. S. Army and Navy, keenly aware of the difficulty of landing critical supplies to support the D-Day Invasion, cleverly conceived "Mulberry" — the Secret Floating Harbor — which was successfully anchored off Normandy Coast.

The U. S. Navy, always alert to protect the fleet and the crews who man it, was early to recognize the increased danger from fires at sea in modern warfare. National Foam, having many times demonstrated its efficiency in quickly extinguishing serious fires on oil tankers and other ships, has been adopted and is used extensively by the U. S. Navy to help protect the fleet.

Most oil refineries, also large industrial plants, have been protected for many years against fires by National Foam Fire Fighting Equipment.

Our Engineers will gladly consult with you and recommend the type of equipment best suited to effectively meet your needs.

IN FIRE DEPARTMENT SERVICE

National Foam System has equipment especially designed for the use of Fire Departments to meet all types of fire fighting requirements. Complete engineering service available.

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Specializing in Foam Fire Protection

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DEPENDABLE FIRE HOSE SINCE 1907

Above all, fire hose must possess durability and strength. Over the years, Crackerjack Fire Hose has consistently met these tests of quality.

Specify Crackerjack, *the fire hose you can always depend on!*

The AMERICAN RUBBER Mfg. Co.
Park Avenue and Watts Street • Oakland, Calif.

IN STEP with PROGRESS

Every now and then letters come in from Fire Companies asking to have their Hale Pumps removed from old apparatus and installed in a new chassis—pumps that have given consistently dependable service for 15 to 20 years and are still in perfectly good condition.

We appreciate the compliment . . . but the idea is not sound. Why? Because increased engine speeds and much greater horsepower make it exceedingly impractical to hook up a 1924 pump with a 1944 engine.

The proper solution is one of the current model Hale Pumps thoroughly in step with modern engines.

Write for up-to-date information on Hale Pumps—built in all standard capacities.

HALE
FIRE PUMP COMPANY
Conshohocken, Pa.

Los Angeles (Cal.) has a new Battalion District, the new Chiefs being former Captains T. C. Loggins and Keith Klinger.

Robert M. Clark, Kent (O.), was elected president, Ohio State Volunteer Firemen's Association at its 6th annual meeting in Lancaster (O.).

Rollie Wilson, veteran of 22 years fire service has assumed duties of Chief of the Marion (Ind.) Fire Department, filling the vacancy caused by the death of Chief Burr Hamilton. Verne Boots has been appointed Assistant Chief. (Thanks W. B. Carleton.)

Deputy Chief D. J. Kidney Heads Fire Prevention Bureau

Deputy Chief David J. Kidney of the New York Fire Department has taken over the command of the Bureau of Fire Prevention. He succeeds Asst. Chief

Deputy Chief D. J. Kidney

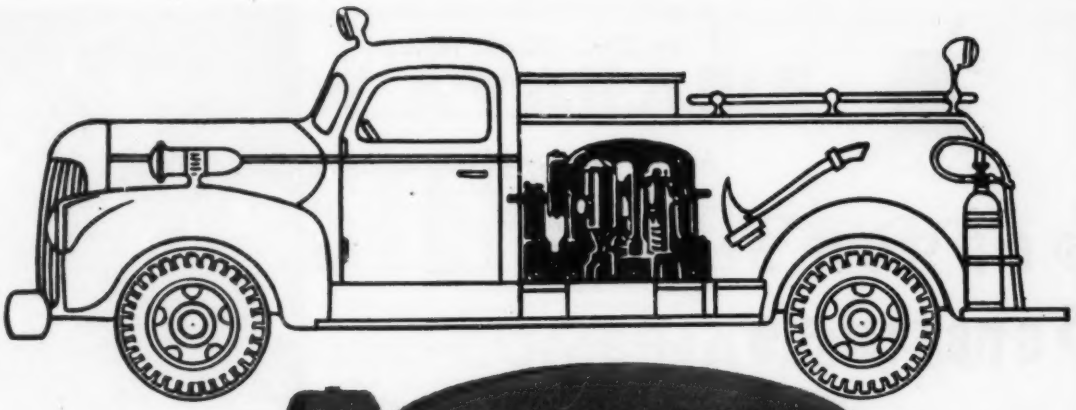
Michael Conway who retired November 1. Chief Kidney has been in the department 40 years and has had a varied career of "ups and downs." He is a recognized administrator; had much to do with writing the current rules and regulations; and formerly represented the Fire Department in the Board of Standards and Appeals—an experience which brought him into close contac. with fire prevention and combustible matters. On November 8 last he worked himself into a knockout at an early morning ten-room fire in the Piccadilly Hotel. He was still in Roosevelt Hospital when Commissioner Walsh announced his designation to command the Bureau of Fire Prevention.

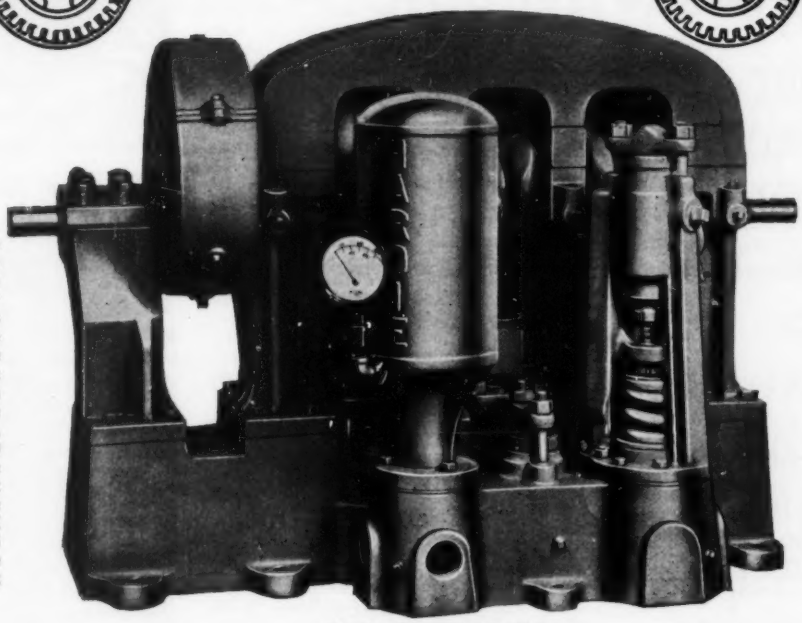
JERRY DALY.

Paul Hardesty Retires

Paul E. Hardesty has retired as manager of the Insurance Department of the Chamber of Commerce of the United States to reenter private industry, after a long-deferred vacation.

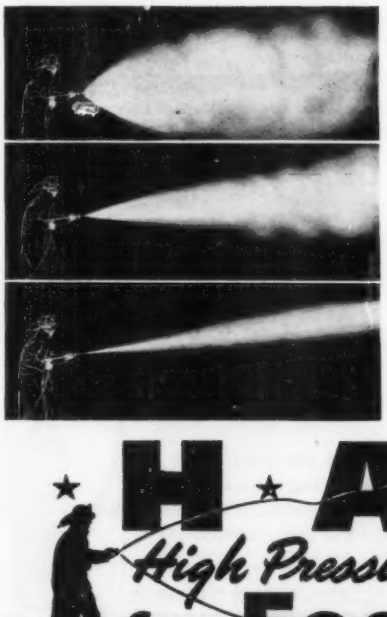
Mr. Hardesty, who was appointed to the Chamber's Insurance Department in 1941 and assumed the managership in 1942 was active in the promotion of fire prevention throughout the country.





● The Hardie High Pressure Pumps give you 600 to 800 P.S.I. at the slow speed. No need to crowd the Hardie to get the nozzle pressure you must have to produce a true fog. The Hardie LCXA pump delivers 60 gallons per minute at 800 P.S.I. at 130 R.P.M. The Hardie LCXX pump delivers 35 gallons per minute at 800 P.S.I. at 118 R.P.M.

Hardie Imperial LCXA



● The compact powerful Hardie High Pressure Pump fits readily into all types of fire trucks. Conversion of existing equipment to Fog Fire Fighter is easy and inexpensive in most cases. The manufacturer of the truck you wish to convert will gladly tell you how you can put a Hardie pump into it and enjoy all the advantages of this new and better method of controlling many types of fires. When you buy a Fog Fire Fighter specify the Hardie pump and Hardie Fog Gun. Leading fire control equipment manufacturers equip their Fog units with Hardie pumps and guns. Complete specification data on request.

THE HARDIE MFG. COMPANY

Hudson, Mich. Los Angeles, Calif. Portland, Ore.

Canadian Distributor—Clarence W. Lewis, Grimsby, Ontario

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High Pressure PUMPS AND FOG GUNS for Fog Fire Fighters

Season's Greetings

To our thousands of friends in the fire service we extend our thanks and our heartiest best wishes for a happy holiday season and a victorious new year

POWHATAN
BRASS & IRON WORKS
RANSON ★ WEST VIRGINIA
Phones 93 & 94 - Charles-Town, West Virginia

Established 1892

PACIFIC COAST NEWS
By Bob Greenock

Another Richmond Housing Fire

Families of thirty-two shipyard workers were made homeless on September 25 when a fire raced through a 32-family housing unit in the War Terrace Apartments, Richmond (Calif.) overlooking the Kaiser Shipyard No. 3.

Six Richmond companies responded to the two alarms but although the fire was soon under control firemen were forced to overhaul for more than two hours because of the way the fire had spread through wooden heating vents. Fire Chief W. P. Cooper, reporting the $25,000 loss said his men had to "take the place apart" to extinguish the blaze and added "I'm thankful that this time there was no loss of life as there has been in other of these fires." Perhaps the fact that the fire occurred at 1:24 P. M. instead of A. M. helped. The cause was an overheated stove. Fire Chief Cooper has relentlessly fought the type of construction employed in housing projects and more than once has clashed with housing authorities over the fire hazards which have been responsible for not less than a dozen deaths in dormitory fires in the overcrowded city. In some cases, inadequate fire alarm and hydrant protection have been contributing factors.

* * *

And Still Another in Richmond

On September 11 an early morning fire caused by an overheated furnace air duct, swept through a 13-family War Housing unit at 722 South 15th Street making homeless more than 35 persons.

Five pieces of apparatus battled the blaze for more than two hours with off-shift firemen and auxiliaries aiding in fighting the fire which spread through the interior along the heat ducts.

Although none was injured, many had narrow escapes.

The first alarm was telephoned by a resident at 2:30 A. M. A box was struck immediately and a second alarm was radioed at 2:34 by the first chief to arrive. Damage was estimated at about $20,000.

* * *

Pacific Hero Joins S.F.F.D.

Thomas J. Powers, 28, veteran of Guadalcanal who saw action with the 164th Infantry, recipient of the Purple Heart, a Distinguished Service Medal and a Presidential unit citation, recently became the first veteran of World War II to enroll in the San Francisco Fire Department.

Powers was given a medical discharge after he was wounded in action against the Japanese. He qualified for a limited tenure appointment and has been assigned to Engine 28. After the war he will be permitted to take a civil service examination to fill one of the vacancies caused by deaths of firemen in service with the armed forces.

* * *

Navy Calls Municipal Department

When Navy fire fighters at the Hunters Point Drydock in San Francisco were unable to bring under control a fire aboard a submarine on the

YOU'VE NEVER SEEN SPEED UNTIL YOU'VE SEEN *This* IN ACTION!

● Dangerous fires...especially those involving flammable liquids, gases and electrical equipment...must be knocked out speedily, decisively.

And THEY ARE when the DUGAS Extinguisher with PLUS-FIFTY DUGAS Dry Chemical gets to work!

PLUS-FIFTY DUGAS Dry Chemical strikes the flames...then releases fire-smothering gases...and the fire is out.

Non-toxic, non-corrosive, and non-abrasive, PLUS-FIFTY DUGAS Dry Chemical harms nothing except fire. Get all the facts about PLUS-FIFTY DUGAS Dry Chemical and priority information regarding DUGAS Extinguishers. Write today!

Approved by Underwriters' Laboratories and Factory Mutual Laboratories.

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DRY CHEMICAL
U.S. PATENT 1782660

SEND FOR FREE CHART... showing characteristics of all types of approved hand fire extinguishers.

MODEL 30-T HAND EXTINGUISHER FE-2-M

ANSUL CHEMICAL COMPANY
MARINETTE, WISCONSIN
DUGAS DIVISION

NOW AVAILABLE

MIDWESTERN *Fireman's*

Rubber or Canvas—COMBINATION SUIT

Special combination suit with Bunker Pants is Midwestern's Outfit No. 101. Detachable wool linings. Flexible elastic inner sleeve for wrist. Keeps out water, cold and sparks. Equipped with Midwestern Safety Snap, a new exclusive feature. Can be easily and quickly fastened or unfastened—nothing can catch on it. Will not freeze or jam as easily as old type snap. Midwestern garments are favored by the larger municipal departments throughout the country. Write for literature and prices.

THE COAT:

- Adjustable collar strap
- Reinforced collar band for lining
- Lining attached with quick snap buttons
- Corduroy lined collar
- Reinforced, double stitched seams
- Vertical seams in sleeve shoulders
- Inside of fabric, heavily napped cloth
- Two outside pockets
- Wool detachable lining
- 6-inch storm flap

REGULAR FIREMAN'S BOOTS NOW AVAILABLE

Fireman's boots ¾ length, reinforced instep, felt linings. Do not confuse these boots with reclaimed boots which have been offered firemen for past 2 years. These are regular fireman's boots made of the new synthetic rubber. Write.

See your Midwestern Mfg. Co. representative for catalog and prices, or write the factory.

THE PANTS:

- Lining held by snap buttons
- Rubberized fabric belt in lining
- Eight suspender buttons
- Safety snap on belt
- Two side and one hip pocket
- Reinforced adjustable belt
- Special Vanitex fabrics
- Wide protecting flap
- Reinforced by rivets

MIDWESTERN MFG. CO., MACKINAW, ILLINOIS

night of October 1, they pulled Box 6721 outside the reservation firehouse to summon San Francisco firemen.

For nearly three hours the combined forces, augmented later by the San Francisco department's rescue squad, fought the fire before it was brought under control. The submarine was undergoing a routine overhaul when the fire broke out.

The Navy, which barred city policemen from the scene, said there were no casualties. The Navy did not immediately make an estimate of the damage but set up a board of inquiry.

* * *

Gasoline—Cigarette—$100,000 Loss

Fire resulting from a combination of an unnamed truck driver, a lighted cigarette and punctured gasoline tank, on September 10, left 300 persons homeless and caused damage estimated at $100,000 to a three-story hotel at Des Rios, Sacramento (Calif.) suburb.

According to Sheriff Don Cox, the driver backed his truck into a pillar in the garage, damaging the tank. He got out to inspect it while holding a lighted cigarette and an explosion and fire followed, severely damaging four street-floor stores and many rooms in the hotel before firemen from Sacramento and several nearby towns were able to control the blaze.

* * *

Another Hotel Fire Kills Two

Fire originating in the basement kitchen from unknown causes the night of September 23, completely destroyed the 400-room Weed hotel at Dunsmuir, Siskiyou County (Calif)—a division point on the Southern Pacific Railroad. Damage is estimated at $200,000. Two men were killed and two others seriously injured.

Firemen, policemen and volunteers were unable to enter the hotel to search for occupants.

Worcester Slaughter House Fire

One fireman was injured and damage to the extent of $200,000 resulted from a three-alarm fire that destroyed a four-story brick building used as a slaughter house by the White, Pevey and Dexter Company at Worcester, Mass., on November 1. The injured fireman was James Ford of Engine 6. One section of the building was also used as a liquor storehouse for the Miscoe Spring Water Company and it was the loss of the liquor which ran the figure to $200,000.

All of the structure with the exception of a strip of the main building, and an ell, was destroyed by the flames. The fire started in the rear of the building in a spot employes said had not been visited by anyone for several hours.

Upon arrival at the scene Fire Chief Carl J. Kiessling immediately ordered a second alarm and a third alarm soon followed, moving practically all Worcester fire apparatus.

Twenty hose lines were laid into the fire, some from Shrewsbury Street under the tracks of the Boston & Albany Railroad, and others from Franklin Street. A railroad signal house adjacent to the fire continued to operate throughout the fire, although the blaze was often dangerously close.

THOMAS F. MAGNER.

BETTER BADGES

than you ever got before—

For the past 64 years we have supplied the fire fighters of America with the finest badges they have ever worn.

Now—because of the government's prohibition of the use of nickel, brass, copper, nickel plating, and chromium — we are making these badges and insignia in sterling silver, sterling silver gold plated, rolled gold on sterling silver, and 14 karat gold.

Today — for just a little more, you get a sterling silver Braxmar Badge — without doubt the best badge you can buy anywhere.

Recommend Braxmar to all your fellow fire fighters and wear one yourself.

★

The blue covered catalog is the latest published but write for our new price list effective July 29, 1943. Only prices in the catalog on 14 karat gold items are still in effect. All auto plates are discontinued for the duration.

★

C. G. Braxmar Co., 242 W. 55th St., N. Y.
John O. Veit, Pres.

BRAXMAR BADGES

Standard for over 64 years

MANHATTAN FIRE HOSE

Radio-Active Treated, Mildew-Proof . . . Rot-Proof...Freeze-Proof... and with FLEXLASTICS* for longer Service life. Every length Pressure-Tested and Flat-Folding for easier, safer handling.

**The term FLEXLASTICS is an exclusive MANHATTAN trade mark. Only MANHATTAN can make FLEXLASTICS.*

KEEP AHEAD WITH MANHATTAN

51st YEAR

THE MANHATTAN RUBBER MFG. DIVISION
of RAYBESTOS-MANHATTAN, INC.
Executive Offices and Factories, Passaic, N. J.

EDDY
Fire Hydrants

Are given preference by so many fire protection and water works men because they know that more than half a century of experience goes into their manufacture and they embody valuable and exclusive features.

Write for the Facts

EDDY VALVE CO.
Waterford, N. Y.

We wish our many friends in the fire service a merry holiday season—and—good news for 1945—we will devote part of our facilities to the manufacture of municipal fire apparatus.

MAXIM MOTOR COMPANY
MAXIM
MIDDLEBORO, MASS.

MAXIM MOTOR COMPANY MIDDLEBORO, MASS.

"ALL AMERICAN CHOICE"
INVINCIBLE NOZZLES
PREPARE — PROTECT

Portable equipment is the watchword of today.

Buy

INVINCIBLE NOZZLES

and enjoy the benefits derived by experience of the pioneers in the nozzle field.

Fig. 403

F. N. McINTIRE BRASS WORKS
Successors to A. J. Morse & Son, Inc.
BOSTON, MASS.
1937 - - 1944

The element of time is of first importance in the successful treatment of burns. If a burn is treated within 15 minutes after it occurs, the probability of blister formation is reduced to a minimum. But if time is wasted before proper treatment is started, serious complications and infection may follow.

When using Gebauer's TANNIC SPRAY in the treatment of burns, the factors involving time-loss are eliminated. This preparation is a stable solution of tannic acid ready for immediate use. Packaged in a sturdy amber bottle having an automatic dispensing cap, which permits the projection of the solution in the form of a fine jet stream. Upon application the solvent evaporates rapidly, covering the burn with an evenly applied, dry and flexible film of tannic acid.

Gebauer's TANNIC SPRAY is a practical *first* first-aid treatment for first, second, and smal area third degree burns. Write for literature.

THE GEBAUER CHEMICAL CO.
9410 St. Catherine Ave. • Cleveland 4, Ohio

Manufacturers' Announcements

(*Continued from page* 877)

Returns to U. S. Rubber Co.

Tom Flynn has resumed his duties with the Eureka Fire Hose Division of United States Rubber Co., 1101 Central Parkway, Cincinnati, Ohio, branch following his honorable discharge from the U. S. Army Air Corps Base, Miami Beach, Fla.

Tom Flynn

Tom returns after eighteen months service to his original territory, which sales unit covers the States of Tennessee, Kentucky, Mississippi, Ohio, western Virginia and West Virginia.

American Machine & Die Co., Inc.

The Marthaler Machine and Engineering Co. which was in receivership for the past several years, has been re-

Erick Siren

organized and the name changed to the American Machine & Die Co., Inc. Mr. John C. Holten is President of the new company, headquarters of which are at 830 Minnesota Building, St. Paul, Minn.

The company has announced that it is now manufacturing Erick Sirens, which have been in the field for 22 years.

Tachometer Bulletin

Bulletin No. 44-1 just published by Jones Motorola Company, Fairfield Avenue, Stamford, Conn., manufacturers of tachometers and other industrial products, describes four models of Jones individual-mounted tachometers and the Jones multi-range portable hand tachometer. The illustrated Bulletin gives data on r.p.m. ranges available, mounting dimensions, installation and other details.

One of 70 Master-Lights

TYPE WS
MILE-RANGE
HAND
SEARCHLIGHT

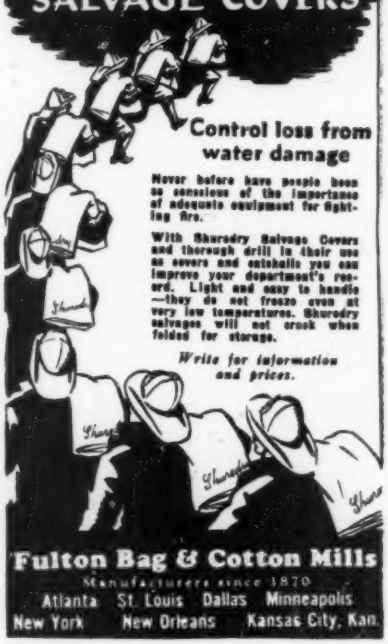
● RECHARGEABLE ●

- LIGHTEST IN WEIGHT
- MOST POWERFUL—MILE RANGE
- LONGEST BURNING HOURS
- ALL NIGHT WORK LIGHT OR
- 150,000 C. P. SEARCHLIGHT BEAM
- SLIP SPARE BATTERY IN PLACE IN 20 SECONDS
- PERFECTLY BALANCED HANDLE

SEND FOR NEW
FREE EMERGENCY LIGHTING
BULLETIN No. 144

CARPENTER MFG. CO.
200 Sidney St.
Cambridge 39, Mass.
"MASTER ★ LIGHT ★ MAKERS"

USE
Shuredry
SALVAGE COVERS



Control loss from water damage

Never before have people been so conscious of the importance of adequate equipment for fighting fire.

With Shuredry Salvage Covers and thorough drill in their use as savers and catchalls you can improve your department's record. Light and easy to handle—they do not freeze even at very low temperatures. Shuredry salvages will not crack when folded for storage.

Write for information and prices.

Fulton Bag & Cotton Mills
Manufacturers since 1870
Atlanta St. Louis Dallas Minneapolis
New York New Orleans Kansas City, Kan.

if it's *action* you want

hook up with HALL-SCOTT!

New Pirsch aerial owned by
Los Angeles Fire Department

In battling a roaring blaze there's no time for dignity or ceremony — *action's* the word! And action's what you get with the new "400" Hall-Scott powered 2000 gallon pumper. Action to get to the fire faster. Action to deliver the *biggest* stream *longer* in 24-48 hours of steady, power-loaded pumping.

Its full rated horsepower carefully harnessed at the low R.P.M. of less than 2200, the Hall-Scott "400" provides highest torque or pulling energy at 1100-1400 R.P.M. You get ALL of the power — LESS of the wear as with all Hall-Scott series engines!

Heavyweight for duty, a "welterweight" on the scales, the Hall-Scott's compact 2190 pounds fits comfortably under most present hoods. And, well aware that fires suit no man's convenience, the makers of the Hall-Scott have designed this engine to be *always* on the job — short of complete overhaul. For unit assembly design permits any part to be removed for servicing, a spare installed, and the apparatus on instant call, while repairs are made as convenient.

HALL-SCOTT *Motor Car Company*

Division of ACF—BRILL MOTORS COMPANY

Factory and General Offices: 2850 SEVENTH STREET, BERKELEY 2, CALIF.

Factory Branches: SEATTLE, WASH. • LOS ANGELES, CALIF. • NEW YORK CITY

THE New WHEAT
Rechargeable Spotlight
MODEL 158
2500 FOOT BEAM
25000 CANDLE POWER
1000 HOURS OPERATION

Critical Materials Reduced to a Minimum to Insure Availability
FEATURES
★ Positive "non-spill" Construction
★ Less expensive Operation than dry cells
★ Free use of Hands. Light carries conveniently on Shoulder Strap
★ Weighs only 92 ozs. complete
★ Simple to Charge and Water No need to take Lamp apart
★ Light can be Focused and Directed as Desired
WRITE FOR COMPLETE DETAILS
KOEHLER MANUFACTURING COMPANY, INC.
MARLBORO, MASSACHUSETTS, U.S.A.

HOSE BRASS GOODS
WB LINE
THE WOOSTER BRASS CO.
WOOSTER, OHIO
BACK THE ATTACK ON FIRE WITH FIRE DEPARTMENT SUPPLIES OF DISTINCTION
★
THE WOOSTER BRASS CO.
WOOSTER, OHIO
★
When you specify products bearing the TRUMPET trade mark, you can SAVE and BANK on SAFETY.

Classified Advertisements

AGENTS WANTED

To sell high grade line of fire protection equipment and fire department supplies. Good proposition. Write—Schwartz Bros., Inc., 731-733 Filbert St., Philadelphia, 6, Pa.

"Established over 37 years."

WANTED

Fire Equipment Supply Companies, to sell Morning Pride Protected Rubber Firecoats, with Wing Sleeves, Chest Protector, Face Protecting Collar, Wool Wristlets, Double Shoulders, No Dirt Pockets. Also Firepants and Mitts. Write Morning Pride Mfg. Co., 1986 Home Ave., Dayton 7, Ohio.

CHIMNEY POWDER

No need to send men on the roof for chimney fires. Has-Mor Soot Destroyer not only puts the fire out, it continues to work until it cleans the chimney, making it unnecessary to go back to another chimney fire. Put up in handy packages. Agents wanted. Harry S. Morgan, 52 Broad St., Johnson City, N. Y.

AGENTS WANTED

Sell popular $3 Dry Chemical Fire Extinguisher. Every household and car owner a prospect. His first hour's work paid Fireman Martin $21 profit. You can also wholesale to stores. Product established 10 years and well recommended. Fire-Killer Mfg. Co., 107-111 N. Franklin St., Syracuse 4, N. Y.

FOR SALE — SIRENS

7—Foster Engineering Company Type 45 Steam Sirens.
19—3 HP, 220 Volt, Sparton Electric Sirens.
8—½ HP, 110 Volt, Sparks-Worthington, Model 100 Electric Sirens.
B. P. Dysart, Purch. Agent, City of Dallas, Tex.

FOR SALE

Guaranteed 500 pounds working pressure. New hi-pressure booster hose with special expansion ring couplings, guaranteed to stay on. 50 foot lengths only. $45.00 per length. Ideal for all types of fog nozzles, using present pumpers. Doray Fire Equipment Co., 1924 Valley Drive, Syracuse 7, N. Y.

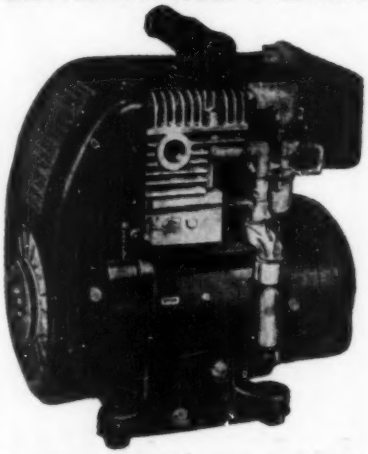
FOR SALE
No Priority Required

2 # carbon dioxide extinguishers	$13.95
4 # carbon dioxide extinguishers	20.16
15 # carbon dioxide extinguishers	34.45

All kinds of fire equipment. Write us your requirements. Doray Fire Equipment Co., 1924 Valley Drive, Syracuse, 7, New York.

FOR SALE

Two 900 G.P.M. Robinson Piston Pumping Engines suitable for war plant or other industries. One 65-ft. Seagrave Aerial Truck. Can be seen at Bayonne Fire Headquarters.
Chief James G. Hogan
Bayonne Fire Dept., Bayonne, N. J.

PORTABLE
FLOODLIGHTING
GENERATING PLANT

This 1500 watt portable generator, with 25% reserve, especially designed for fire department service. Lightweight, rugged and compact. Air-cooled 4-cycle engine 2¾" bore x 2¾" stroke. Quick starting. Fully guaranteed, thoroughly dependable.
Also from 600 to 2500 Watts in A.C. and D.C.
Write for Catalog
SECURITY FIRE EQUIPMENT CO.
1550 Princeton Ave. Trenton, N. J.

PARADISE BLANK-IT SPRAYS
have these features
APPLICATION
VOLUME
AREA
RANGE
& LOW
OPERATING PRESSURE
Covered by U. S. Patents 1922259; Re. 19913; 2284443; 2292794; 2254751.
PARADISE MFG. CO.
3165 S. PENNSYLVANIA ST.
INDIANAPOLIS 44, IND.

The Sign of Quality!

HYDRANTS
VALVES
and
Pipe Line
Accessories

A. W. W. A.
HYDRANTS
Underwriters Approved

Conform to American Water Works Association specifications. Approved and listed by Underwriters' Laboratories and Associated Factory Mutuals. Well known and widely used for many years.

SPECIAL TRAFFIC MODEL (shown at right) is designed to yield at ground line under impact, repair being simply renewal of breakable bolts and breakable coupling on stem. Dry top, revolving head, easy to lubricate. High efficiency because barrel diameter not reduced and there are no working parts or obstructions in waterway.

VALVES: A. W. W. A. types, iron body, bronze mounted with double-disc parallel seat or solid wedge type. Non-rising stem, outside screw and yoke; or with sliding stem and lever. Also furnished hydraulically operated. Square Bottom type operates in any position All are rugged and dependable, made of best material with highest quality workmanship.

M&H VALVE
AND FITTINGS COMPANY
ANNISTON, ALABAMA

Liquefaction and Storage of Natural Gas

(*Continued from page 872*)

was found to be good practice to support the weight of the spherical containers with an outer shell of ordinary storage tank metal. Thus, while the inner sphere was 57 feet in diameter, the other sphere had a diameter of 63 feet. The inner tank was all-weld construction.

Between the two spheres cork blocks three feet thick were placed up to about the "equator" of the steel sphere, where the weight rested when the tank was full. According to reports, at that point powdered cork was used to insulate the space between the inner and outer shells, since there was no weight on the spherical tank in the upper area, and powdered cork is usually effective, while less expensive than cork blocks. For an added protection, dry gases were circulated through the insulation, to prevent the accumulation of any moisture which might freeze and rupture the cork.

Lack of room prevents description of the cylindrical tank in detail. It was of the old low pressure design, but contained alloy steel, with rock wool insulation, substituted for cork because of wartime building restrictions. This reservoir was completely destroyed in the fire and explosion, along with one of the three spherical tanks.

Leakage Trouble Experienced in 1943

It is known that leakage trouble developed when this cylindrical tank was first tested in May, 1943. According to reported evidence, when the sub-zero liquid was introduced into the tank there was uneven contraction of the special steel plates which caused a rupture in the bottom of the tank. The rupture was said not to be in the welded seams but in the metal itself. Here may be a clue to the seat of the trouble if, as some believe, it originated in the cylindrical container.

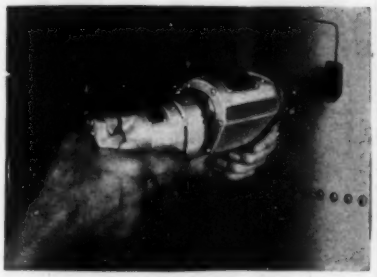
Aftermath of the Holocaust

Unquestionably, the disaster will have far-reaching repercussions. Already Cleveland municipal authorities have drafted legislation prohibiting the installation of such a plant within 2,000 feet, or more, of inhabitated areas and it is said that reconstruction of the original liquid gas plant will not be permitted at its old location.

In St. Paul, Minn., the National Board of Fire Underwriters was expected to decide whether or not the Skelgas division of the Skelly Oil & Gas Co. would be permitted to erect a gas plant in the Midway district of that city. The company had already been given a permit to erect a plant, but property owners in the vicinity petitioned for a rehearing of the case, and the National Board was asked to rule upon it. The Skelgas Company declares there is no similarity between its proposed plant and the one in Cleveland.

According to the National Board of Fire Underwriters the tragedy will result in additions to, or changes in, fire prevention and building codes and zoning laws.

THE NEW
SAW-GUN
SHOULD BE STANDARD
ON ALL
FIRE-FIGHTING EQUIPMENT



Here's Why..!

The Saw-Gun is a portable power-saw that will quickly cut into all metals, wood and other materials. Quickly attaches to any electric or air drill, and may also be propelled by a flexible shaft. Insert ordinary hack-saw blade for cutting.

Firemen equipped with this handy tool can now get at the fire quickly. Can cut openings into obstructions regardless of their material. Cuts rapidly through heavy gauge steel. No need to waste precious time removing steel gratings . . . cut them out of the way with this amazing portable tool. Does away with slow, cumbersome, dangerous gas cutting torches, together with their long lines of hose and heavy tanks.

Progressive fire-chiefs who know the importance of getting at a fire *fast*— who want a quicker means of getting to entrapped persons, will add the Saw-Gun as standard equipment.

ONLY
$42.00
QUICK SHIPMENTS ON AA-5 PRIORITY OR HIGHER

Sold on Money-Back Guarantee

SEE YOUR JOBBER or WRITE DIRECT
Mid-States
EQUIPMENT COMPANY
Saw-Gun Division
2419 S. MICHIGAN AVE., CHICAGO 16, ILL.

DOUBLE SERVICE
with
BI-LATERAL

This installation shows the position of the rubber lining in BI-LATERAL FIRE HOSE when held in a flattened position between calls into service. This is why we can save a city one replacement, because this hose will give double service of any hose constructed under the old method.

Also we can load 25% more on the apparatus bed actually making an $8,000 truck loaded with Bi-Lateral construction, cheaper than a $7,000 one loaded with other construction.

Here's the new DROP-FORGED rubber lug coupling (cast over bronze) with the swivel protecting feature.

BI-LATERAL FIRE HOSE CO.
20 No. Wacker Drive Chicago, Ill.

JANESVILLE QUALITY TURN OUT CLOTHING

Our turnout suits are giving excellent satisfaction in most of the large fire departments throughout the U. S. and

THERE MUST BE A REASON WHY SO MANY FIREMEN INSIST ON JANESVILLE QUALITY

NOW AVAILABLE!
We can now supply old type ¾ Felt-lined Firemen's Boots.

JANESVILLE APPAREL CO.
JANESVILLE, WIS.

New Haven Gasoline Blaze

(*Continued from page* 873)

be encountered by municipal fire departments.

Water-Fog was selected as the most efficient appliance for the Fire Department's work, and the entire New Haven Department was equipped with Rockwood Fog nozzles, both the 2½" and the 1¼" all-purpose nozzles with applicators.

Every company in the department received training in the use and application of Fog. The men were taught how to fight on oil fire and were then made to extinguish such fires themselves.

This type of fire training proved conclusively the value of practical education for fire departments. By this training the men became adept to handling the equipment provided for fighting oil fires. They had confidence in their equipment, which could not have been acquired by lectures or book learning alone. Thus they were not frightened by the sight of a large gasoline fire and they tackled the job in an efficient, workmanlike manner. Had it not been for the training the firemen had received and the fact that our department was properly equipped with Fog nozzles, New Haven would have been faced with a conflagration involving the mercantile area of our city.

Cause and Damage

The cause of the fire was attributed to a defective wheel flange on a freight car, which derailed the car and upset the tank car and other vehicles. The fire was caused by a spark from the high voltage wires against the rails following the crash.

The loss was estimated at $51,109.96, of which $35,000.00 was merchandise and $16,109.96 capital equipment and repairs. The merchandise consisted of cotton goods and gasoline.

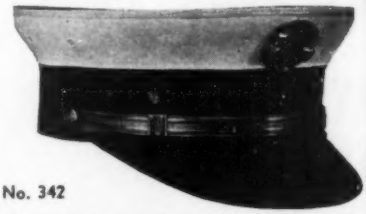
New York Fire Department Tests Hose

The current procedure for testing 2½-inch and 3-inch hose in the New York Fire Department was outlined in "Special Order No. 164" of the Department, issued in October last.

This directed battalion chiefs to instruct commanding officers of companies in their battalions to test hose in their possession, issued prior to January 1, 1941, at a pressure of 200 pounds. Chief officers were ordered to arrange the time of tests in each company so as not to conflict with companies in adjoining battalions in responding to first alarm assignments.

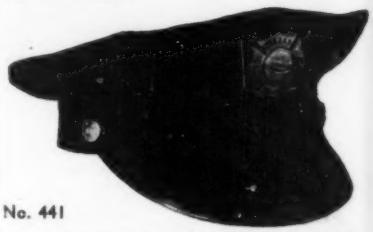
The order called for the taking of all proper precautions to avoid accidents or injury to men. "After hose is connected to engine and capped—said the Order — members of the department shall not be allowed near it, except the pump operator, until such time as the pressure is released by the pump operator." All burst hose was ordered marked at the pressure at which it burst, and hung in the hose tower until called for.

WENTWORTH
FIREMAN'S UNIFORM CAPS
Union Made **Prompt Delivery**



No. 342

Wentworth Fireman Caps are made of the Highest Quality Standard Materials available and by the Best Skilled Union Craftsmen in all the New and Standard styles. Our 49 years of experience and skilled workmen guarantee you AMERICA'S GREATEST CAP VALUE in all WENTWORTH FIREMAN CAPS.

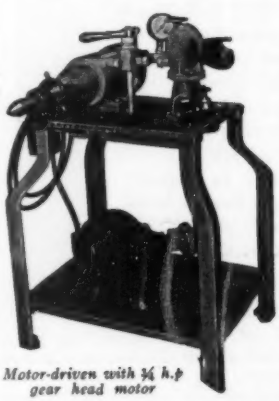


No. 441

Write direct for latest circular and prices or see your local dealer.

WENTWORTH-FORMAN CO., INC.
578b Washington St., Boston, Mass.
Manufacturers
Fireman Cap Specialists for Over 49 Years

In Line with
NATIONAL DEFENSE
DAYTON POWERDRAULIC



Motor-driven with ¾ h.p gear head motor

★ Expands couplings from ¾" to 6" size.

Tests hose up to 700 lbs.

Extra attachment removes old expansion rings from old couplings. No manual effort needed. ★

FOR THE PROPER CARE OF HOSE
MORE PRESSURE - LARGER MOTOR
ROOMIER WORK TABLE
REPLACEMENT SEGMENTS (ALL SIZES)
FOR ANY OLD HYDRAULIC EXPANDER

SEND FOR ILLUSTRATED BULLETIN
DAYTON FIRE EQUIPMENT CO.
1242-48 W. 2ND ST. - DAYTON 7, OHIO

Los Angeles Firemen's Memorial

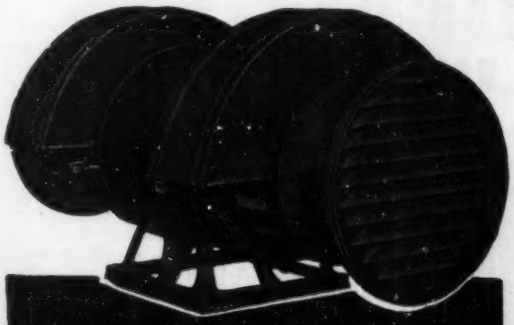
Two seemingly short generations have elapsed since the first paid fireman went to work for the then tiny City of Los Angeles. From that humble beginning to the present great Fire Department of the fourth largest city in the United States is a saga of sacrifice and devotion to duty that equals any tale that has ever come out of the famed Far West.

Los Angeles Dedicates Firemen's Memorial
At ceremonies dedicating the Los Angeles firemen's memorial in City Hall Park, Chief John Alderson watches the president of the "Wives of Firemen's Club" place wreath on the base of the beautiful shaft.

Down through the years of war and peace that have ensued there has been an ever growing list of these men who have paid the supreme sacrifice in serving the citizens of their community. These firemen in their passing, left a void among their comrades and stripped a home of the love and care of a husband, son, or brother. Their deaths are a constant reminder to those remaining that fate in its unpredictable choosing is no respecter of station.

There has been a growing belief on the part of those connected with the Los Angeles Fire Department and a public, which has voiced its appreciation of the efforts and sacrifice of its fire service that a fitting memorial should be erected to the men who have, and who will in the course of time give their lives in line of duty.

The organizational work connected with the erection of the monument fell primarily to the Los Angeles Firemen's Relief Association, with the assistance of Chief Engineer John H. Alderson and the uniformed personnel of the department, and various other civic groups and enterprising citizens of the city, who wished to be identified with such a memorial. It was decided that the memorial would be dedicated with appropriate ceremonies at the close of Fire Prevention week and that the beau-



STERLING MODEL "M"
GENERAL ALARM SIREN
You Can Depend On It *ALWAYS*

An absolutely dependable, tried and proven siren for communities of all sizes. Loud, clear, simple to instal and no maintenance to bother with. Embodying the "know how" of the oldest and largest makers of siren signals in the fire field. Write for descriptive literature and list of towns using the model "M".

ALSO
manufacturers of a complete line of apparatus sirens.
Write for literature.

STERLING SIREN FIRE ALARM CO., Inc.
55 Allen Street Rochester, New York

120 Years of Leadership

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tiful south park of the City Hall grounds would make an ideal location.

At the close of Fire Prevention week, on October 14, 1944, the monument was dedicated with beautiful and impressive ceremonies. The crowd that had gathered to witness the rites were addressed by Mayor Fletcher Bowron and Chief Alderson. Included among the numerous guests were Fire Chiefs from the many near by cities and officials of the City, County and State governments. The dedication was made by the Department Chaplin, Battalion Chief Joseph Hoffman, assisted by the Belmont High School A-Capella choir and soloist Fireman Leonard Askham. The monument was unveiled by the two young daughters of Captain Daniel Morse and nieces of Fireman Ercil Morse who lost his life in the line of duty. A floral wreath of homage was placed on the monument by the president of the Wives of Firemen's Club and the ceremonies were concluded with taps and a rifle salute by Fire Fighters' Post No. 102, American Legion.

Occupying a commanding site near First and Spring Streets on the south City Hall Park, the monument is over twelve feet in height and is constructed of twin black polished marble shafts with a center column of white granite. White marble blocks top the outer shafts, one carrying the fireman's cap ornament, a Maltese Cross fashioned as a badge. The center column carries the inscription: "IN MEMORIAM TO THE FIGHTING FIREMEN OF THE LOS ANGELES FIRE DEPARTMNT WHO GAVE THEIR LIVES IN THE PERFORMANCE OF THEIR DUTY."

It is the intention of the Relief Association in conjunction with the Los Angeles Fire Department, to hold yearly services at the site of the memorial shaft sometime during annual Fire Prevention Week.

BILL GOSS,
Los Angeles Fire Department.

The Round Table

(*Continued from page* 882)

Howard Travers, Chief, Baltimore, Md.: The Army, the Navy and the U. S. Coast Guard have all developed fire fighting schools in a most efficient way; especially the U. S. Coast Guard at Fort McHenry, Baltimore, of which I have personal knowledge. I have no hesitancy in saying that I am of the opinion that when the men in the armed forces return to civil life their training will be most helpful to the fire service.

D. A. O'Connor, Chief, Omaha, Neb.: A great number of the men who are receiving training in fire fighting in the armed forces are fire fighters from the various fire departments throughout the United States. If and when these men return to their old positions as fire fighters, I believe they will be very valuable men, providing they have not been affected with any disability or incurable disease. They will certainly know more about fire fighting, as they have been trained to use up-to-date fire fighting equipment both on land and sea. All of them might not return to their jobs in the fire department but might go into the field of business. To my way of thinking,

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these men should know something about fire prevention. I don't know of any better way they could use their fire fighting experience than to organize fire brigades in their plants.

E. P. Welch, Chief, Columbus, Ohio: I feel that the training given firefighters in the armed service will definitely be beneficial to municipalities. I have had the pleasure of receiving a great number of communications from one of the chief drill masters of the Navy, a man who at one time was a battalion chief in our department and who is at the present time located in San Diego, Cal., in charge of the training program for sailors.

From my experience in the Army, and the information received from the Navy, I would say that the members of the Navy, upon discharge, will be more qualified than the members of the Army, for I believe the Navy program is more extensive and that the Army relies greatly on retired firemen and civilian personnel to protect Army property.

It is my understanding that the Navy, after becoming fire conscious, put on a very thorough training program, and the experiences the men have had in their schools such as the use of fog nozzles, forcible entry, the use of gas masks and extinguishment of liquid fires as well as other combustible materials, will be very valuable. Any city receiving men of this type will at least not have the job of selling them on the importance of proper methods of attack and the equipment to be used.

It is true that they have not had to deal with the many different types of hazards encountered in municipalities, but nevertheless that training can certainly be expedited by the fact that the foundation in fundamentals has been well laid.

Leo B. Barry, Chief, Utica, N. Y.: I believe that the fire training received by men in the military service will be beneficial to those who receive it.

Much of the training is done with simulated incidents and the men receive practical experience in the various methods of extinguishment under actual fire conditions. This, in my judgment, teaches men that they can go into a fire without fear, and the cautiousness that often handicaps novices in the fire game is thus overcome.

Another feature of military training that is beneficial to fire departments is the respect for discipline that all servicemen learn.

Thomas H. Cotter, Chief, Providence, R. I.: I am of the opinion that the young men now being trained in our armed forces in fire protection and fire fighting will be excellent material for our municipal fire fighting forces.

The training, and in many instances the actual experiences they are now undergoing in fire protection units of our armed services, are the outcome of especially adapted courses and procedures that our International Association of Fire Chiefs Committee recommended to the Government, or otherwise assisted in creating, for safeguarding against fire.

In addition, the greater percentage of these young men serve under the direction of former municipal fire officers, and are therefore being properly trained by efficient fire fighters.

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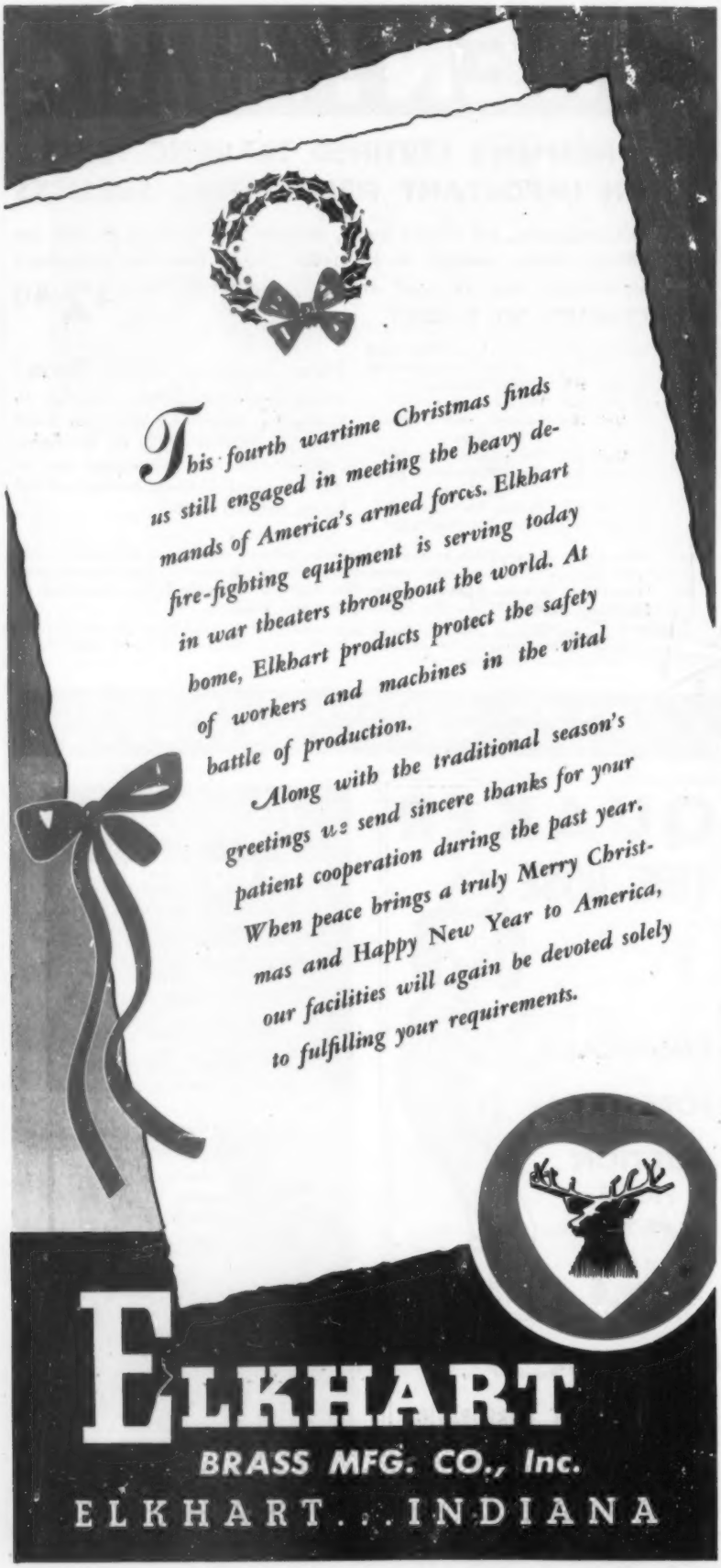
This fourth wartime Christmas finds us still engaged in meeting the heavy demands of America's armed forces. Elkhart fire-fighting equipment is serving today in war theaters throughout the world. At home, Elkhart products protect the safety of workers and machines in the vital battle of production.
Along with the traditional season's greetings we send sincere thanks for your patient cooperation during the past year. When peace brings a truly Merry Christmas and Happy New Year to America, our facilities will again be devoted solely to fulfilling your requirements.
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ADVERTISING INDEX

FIRE ENGINEERING
DECEMBER, 1944

	Page
A & M College Book Store	915
Acme Protection Equipment Co., Inc.	892
Akron Brass Mfg. Co., Inc.	889
American Car & Foundry Co. Hall-Scott Div.	909
American La-France-Foamite Corp.	863
American Machine & Die Co., Inc.	89-
American Marsh Pumps, Inc.	900
American Rubber Mfg. Co.	902
Anderson Fire Fight. Equip. Co., Inc.	858
Ansul Chemical Co. (Dugas Div.)	904
Atlas Safety Equipment Co., Inc.	891
Bean Mfg. Co., John, Division Food Machinery Corp.	852-853
Bi-Lateral Fire Hose Co.	912
Boyer Fire Apparatus Co.	914
Braxmar Co., Inc., C. G.	906
Buckeye Iron & Brass Works	894
Carpenter Mfg. Co.	908
Circul-Air Corp.	915
Cover, H. S.	914
Curtis & Sons, L. N.	896
Dayton Fire Equipment Co.	912
Dugas Division of Ansul Chemical Company	904
Duo Safety Ladder Corp.	851
E & J Mfg. Co.	860
Eastman Company, Inc., Samuel	913
Eddy Valve Co.	906
Elkhart Brass Mfg. Co.	916
Emerson Co., J. H.	Inside Front Cover
Eureka Fire Hose Div. U. S. Rub. Co.	888
Excelsior Brass Mfg. Co.	914
Federal Electric Co.	849
Fog Nozzle Co.	Back Cover
Four Wheel Drive Auto Co.	Inside Back Cover
Fulton Bag & Cotton Mills	908
Gamewell Company	864
Gebauer Chemical Co.	908
General Detroit Corp.	885
Goodall Rubber Co.	890
H. O. R. Company	898
Hahn Motors, Inc.	900
Hale Fire Pump Co.	902
Hall-Scott Motor Car Co.	909
Hardie Mfg. Co.	903
Harrington Signal Co.	914
Homelite Corp.	899
Janesville Apparel Co.	912
Kidde & Co., Walter	856
Koehler Mfg. Co.	910
Link, Fred M.	895
M. & H. Valve & Fittings Co.	911
McIntire Brass Works, E. N.	908
Mack Mfg. Corp.	857
Manhattan Rubber Mfg. Div. of Raybestos-Manhattan, Inc.	906
Maxim Motor Co.	907
Mid-States Equipment Co.	911
Midwestern Mfg. Co.	905
National Foam System, Inc.	901
Oren Fire Apparatus Co.	854-855
Paradise Mfg. Co.	910
Pirsch & Sons Co., Peter	861
Powhattan Brass Mfg. Co.	904
Quaker Rubber Corp.	915
RCA Victor Div. Radio Corp. of Am.	897
Rockwood Sprinkler Co.	887
Scott Aviation Corp.	862
Seagrave Corp.	893
Security Fire Equipment Co.	910
Sireno Co.	894
Smith & Co., D. B.	886
Sterling Siren Fire Alarm Co., Inc.	913
Ward LaFrance Truck Corp.	859
Waterous Co.	884
Wentworth-Forman Co., Inc.	912
Wooster Brass Co.	910

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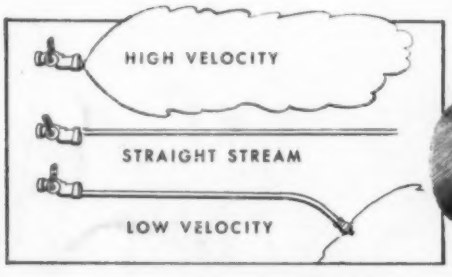

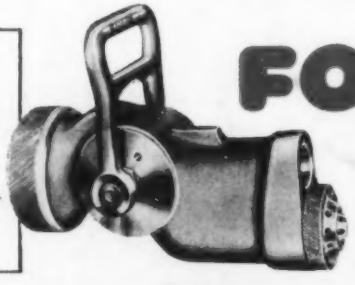

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